Catalog

MFCU - 2008

Fan Coil Units

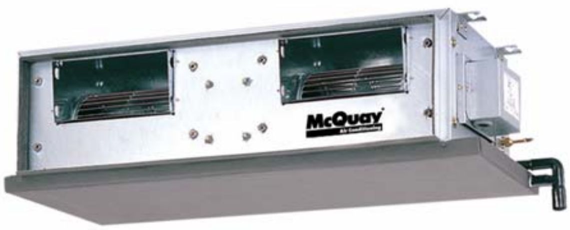
Models: MWM-GW
MCM-DW/EW
MCK-AW/BW/CW
MCC-CW
MDB-BW













McQuay®
Air Conditioning

Engineered for flexibility and performance.™

Table of Contents

This manual supercedes MFCU-2007

Note : Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations, and experienced with this type of equipment.

Caution: Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

Warning : Moving machinery and electrical power hazard. May cause severe personal injury or death. Disconnect and lock off power before servicing equipment.

Nomenclature

M | WM | 025 | G | W | ☐ | - | A | X | AB

Production spec variation → AB

Type of ref. connection → X

X : Not applicable

Electrical → A

A : 220 - 240V/1Ph/50Hz
F : 380 - 415V/3Ph/50Hz
U : 220 - 240V/1Ph/50Hz/60Hz

Piping → ☐

H : 4 pipes system

Model Type → W

W : Chilled water fan coil

Series → G

G : G series

Capacity → 025

025 : 18,000 Btu/h (Cooling)

Model Name → WM

WM : Wall mounted split type
CK : Ceiling cassette split type
CM : Ceiling exposed split type
CC : Ceiling concealed split type
DB : Ducted split type

Brand → M

M : McQuay

Product Line-Up

MWM-GW Product Line-Up

Model Name		Nomenclature	Classification										
			Control			Handset			Marking	Connection	Air Filter		Piping
			PCB - W2_L	Valve/Valveless	Cool/Heat	G11 Heat Pump Handset	G11 Cooling Handset	G7 Cooling Handset	CE mark	1/2" BSP Female adaptor	Ionizer filter	Nano filter	Left piping
MWM	007GW	AXAA	x	x	x	x			x	x	x	x	x
		AXAB	x	x	x		x		x	x	x	x	x
	010GW	AXAA	x	x	x	x			x	x	x	x	x
		AXAB	x	x	x		x		x	x	x	x	x
	015GW	AXAA	x	x	x	x			x	x	x	x	x
		AXAB	x	x	x		x		x	x	x	x	x
	020GW	AXAA	x	x	x	x			x	x	x	x	x
		AXAB	x	x	x		x		x	x	x	x	x
	025GW	AXAA	x	x	x	x			x	x	x	x	x
		AXAB	x	x	x		x		x	x	x	x	x
	301W	AXAB	x	x	x			x	x	x		x	x

Product Line-Up

MCM-DW/CBW/EW Product Line-Up

Model Name		Nomenclature	Classification									
			Control				Handset				Marking	Connection
			W2.0 UCW	W/out Control	Valve/Valveless	Cool/Heat	G7 Cooling Handset	G7 Heatpump Handset	SLM 3 (Heat pump)	NETWARE 3 (Cool/Heat)	CE mark	3/4" BSP (female) brass union
MCM	020DW	AXCC	x		x	x	x				x	x
		AXCD	x		x	x		x			x	x
		AXCE	x		x	x				x	x	x
		AXCF	x		x	x			x		x	x
		AXCG		x	x						x	x
	025DW	AXCC	x		x	x	x				x	x
		AXCD	x		x	x		x			x	x
		AXCE	x		x	x				x	x	x
		AXCF	x		x	x			x		x	x
		AXCG		x	x						x	x
	030DW	AXCC	x		x	x	x				x	x
		AXCD	x		x	x		x			x	x
		AXCE	x		x	x				x	x	x
		AXCF	x		x	x			x		x	x
		AXCG		x	x						x	x
	040DW	AXCC	x		x	x	x				x	x
		AXCD	x		x	x		x			x	x
		AXCE	x		x	x				x	x	x
		AXCF	x		x	x			x		x	x
		AXCG		x	x						x	x
	050DW	AXCC	x		x	x	x				x	x
		AXCD	x		x	x		x			x	x
		AXCE	x		x	x				x	x	x
		AXCF	x		x	x			x		x	x
		AXCG		x	x						x	x
	007CBW	UXBD	x		x	x	x				x	x
		UXBE	x		x	x		x			x	x
	010CBW	UXBD	x		x	x	x				x	x
		UXBE	x		x	x		x			x	x
	015CBW	UXBD	x		x	x	x				x	x
		UXBE	x		x	x		x			x	x
	015EW	AXAA	x		x	x		x			x	x
		AXAB	x		x	x	x				x	x
	020EW	AXAA	x		x	x		x			x	x
		AXAB	x		x	x	x				x	x
	025EW	AXAA	x		x	x		x			x	x
		AXAB	x		x	x	x				x	x

Product Line-Up

MCK-AW/AWH/CW Product Line-Up

Model Name		Nomenclature	Classification							Panel							
			Control		Handset	Marking	Connection			MCK-AW				MCK-CW			MCK-AWH
			PCB - W2.0 UCW	Valve/Valveless	Handset (depend on panel)	CE mark	3/4" BSP (female) brass union	Auto air swing	4 Pipe System	PLCKAW-G7 Cooling	PLCKAW-G7 Heat Pump	PLCKAW-SLM 3 Heat Pump	PLCKAW-Netware 3	PLCKCW-G7 Cooling	PLCKCW-G7 Heat Pump	PLCKCW-SLM 3 Heat Pump	PLCKAWH-G7 Heat Pump
MCK	020AW	AXBE	x	x	x	x	x	x		x	x	x	x				
	025AW	AXBE	x	x	x	x	x	x		x	x	x	x				
	030AW	AXBE	x	x	x	x	x	x		x	x	x	x				
	040AW	AXBE	x	x	x	x	x	x		x	x	x	x				
	050AW	AXBE	x	x	x	x	x	x		x	x	x	x				
	010CW	AXAB	x	x	x	x	x	x						x	x	x	
	015CW	AXAB	x	x	x	x	x	x						x	x	x	
	020CW	AXAB	x	x	x	x	x	x						x	x	x	
	020AWH	AXAA	x	x	x	x	x	x	x								x
	025AWH	AXAA	x	x	x	x	x	x	x								x
	030AWH	AXAA	x	x	x	x	x	x	x								x
	040AWH	AXAA	x	x	x	x	x	x	x								x
	050AWH	AXAA	x	x	x	x	x	x	x								x

Product Line-Up

MCC-CW Product Line-Up

Model Name		Nomenclature	Classification										
			Control			Handset		Marking	Connection		Water Control	Piping	Other
			W2.0 UCW	Valve/Valveless	Cool/Heat	SLM 3 (Heat pump)	NETWARE 3 (COOL/HEAT)	CE mark	Brass adaptor 3/4" BSP (Female)	Brass adaptor 7/8" BSP (Female)	Valve Application only	Left piping	Filter
MCC	010CW	AXAC							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	015CW	AXAC							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	020CW	AXAC							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	025CW	AXAC							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	028CW	AXAA							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x

Product Line-Up

MCC-CW Product Line-Up

Model Name		Nomenclature	Classification										
			Control			Handset		Marking	Connection		Water Control	Piping	Other
			W2.0 UCW	Valve/Valveless	Cool/Heat	SLM 3 (Heat pump)	NETWARE 3 (COOL/HEAT)	CE mark	Brass adaptor 3/4" BSP (Female)	Brass adaptor 7/8" BSP (Female)	Valve Application only	Left piping	Filter
MCC	030CW	AXAA							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	038CW	AXAA							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	040CW	AXAA							x		x		x
		AXAJ	x	x	x		x	x	x				x
		AXAK	x	x	x	x		x	x				x
		AXBA						x	x		x	x	x
		AXBC	x	x	x	x		x	x			x	x
	050CW	AXAA								x	x		x
		AXAJ	x	x	x		x	x		x			x
		AXAK	x	x	x	x		x		x			x
		AXBA						x		x	x	x	x
		AXBC	x	x	x	x		x		x		x	x
	060CW	AXAA								x	x		x
		AXAJ	x	x	x		x	x		x			x
		AXAK	x	x	x	x		x		x			x
		AXBA						x		x	x	x	x
		AXBC	x	x	x	x		x		x		x	x

Product Line-Up

MDB-BW Product Line-Up

Model Name		Nomenclature	Classification									
			Control	Handset	Marking	Connection	Water Control	Air Filter	Piping		Air discharge	
			No Control	No Handset	No marking	Brazing (IN/OUT OD28.6mm)	No Valve	Filter	Right piping	Left piping	Horizontal flow	Vertical flow
MDB	75BW	AXAA	x	x	x	x	x	x	x		x	
		AXAB	x	x	x	x	x	x		x	x	
	100BW	AXAA	x	x	x	x	x	x	x		x	
		AXAB	x	x	x	x	x	x		x	x	
	125BW	FXAA	x	x	x	x	x	x		x	x	
		FXAB	x	x	x	x	x	x		x		x
		FXAC	x	x	x	x	x	x	x		x	
		FXAD	x	x	x	x	x	x	x			x
	150BW	FXAA	x	x	x	x	x	x		x	x	
		FXAB	x	x	x	x	x	x		x		x
		FXAC	x	x	x	x	x	x	x		x	
		FXAD	x	x	x	x	x	x	x			x

Features

Space Saving

Different types of fan coil units are designed to be both versatile and space saving to suit every interior design. Ceiling concealed type for the sophisticated, luxurious floor space saving, all kind of interior decoration; ceiling exposed type for economical and space saving installation; etc.

Zone Control

These fan coil units can be installed in different zones as each unit operates independently. Zone control on energy saving, different comfort requirement; better air distribution needs can therefore be easily achieved.

Standardisation Of Fan Coil Unit Control

The fan coil unit controller is standardized using W2 I.C, which enables the selection of valve / valveless and cooling / heating applications. This allows the user to choose the desired application by just plugging in or removing the jumpers at certain connectors on the PCB. The advantages of these units are lesser inventory for finished goods stock and spare parts. For more details, please refer to General Installation guide.

Unique Features For MWM Series

Easy Installation
The wall mounted fan coil unit is easily installed because of its compact size, slimness and light weight. Slim and short outdoor unit can be easily installed even in a narrow balcony and passageway and yet have a stable profile.

Space Saving
No space is required on either floor or ceiling. This newly developed super slim design for wall mounting maximises floor space usage and enhance ceiling appearance where ceilings are low.

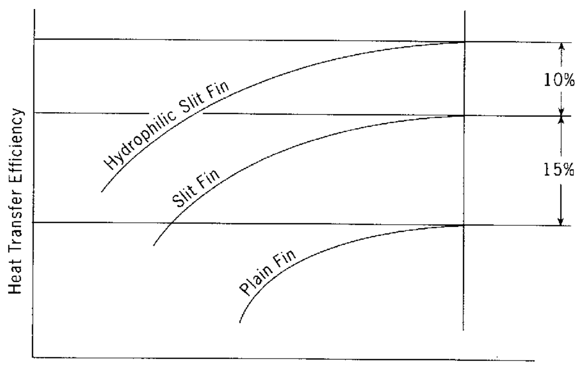
Quiet Operation
Cooling comfort is improved by whisper-quiet operation which is achieved by a tangential fan.

Excellent Air Distribution
Air discharge direction can be adjusted in four directions, manually or automatically by using LCD remote control, coupled with good air flow, the unit provides excellent air distribution.

Facilitated Maintenance Ensured
The new design cassette filter is slide-out type which can be easily removed at the air inlet grille for cleaning. Maintenance is easy for electrical components, piping and wiring as these are all easily accessible by merely removing front plastic panel.

Wireless Remote Control
The compact LCD transmitter is able to operate the air conditioner unit within the distance of 9 meters. Fan motor speed can be set at low/medium/high or automatic. Sleep mode automatically increase set temperature since room temperature is lower at night thus achieving comfort surrounding. Air flow direction can be controlled automatically. Room temperature is controlled by electronic thermostat. The unit can be preset to on and off automatically for maximum of 15 hours by using timer on/off.

Slit Fin
The unique Hydrophilic slit fin has greatly improved the air flow and the contact surfaces with the air thus to boost the cooling capacity.



Unique Features For MCK Series

Built In High Head Drain Pump
The unit comes with a built in high head drain pump. Condensate water can be pumped up to 700mm and drain out smoothly.

4-way Air Discharge And Air Swing
These features greatly improve the air distribution in the conditioned space.

Wireless And Wired Controller Option
Wireless Handset is the standard controller. However if wired controller required, Netware3 & SLM3 wired controller is a wise choice(optional).

Unique Features For MCM-DW/EW Series

2-way Air Discharge And Air Swing
The 2-way air discharge couple with the air swing function, provide better air distribution in the conditioned space.

Easy Maintenance
The air filter and components can be easily accessed from the bottom of the unit. This make servicing and maintenance become a simple task.

Wireless And Wired Controller Option
Wireless Handset is the standard controller. However if wired controller required, Netware3 & SLM3 wired controller is a wise choice(optional).

Unique Features For MCC Series

Elegance And Prestige
As the unit is installed above the ceiling with only the supply and return air grille exposed to view, the air conditioned space will appear as elegant and prestigious as a centralized air conditioned area.

Evergreen Design
This unit will never become obsolete as the unit is completely concealed away. Interior decoration for maximum aesthetic beauty as well as interior design is easily achieved.

Superior Air Distribution
As the conditioned air can be distributed to every corner of the area by air duct, this will ensure more pleasant living environment, thus provide extra comfort to the occupants.

Optional Duct Accessories
The optional duct accessories makes the ducting and installation work so easy.

Wired Controller
Netware3 & SLM3 wired controller offers simple and flexibility in controlling the unit.

Unique Features For MDB-BW Series

Superb Air Distribution
These units are designed with high air flow and static, enables adequate distribution of air to the desired space. Providing comfort to every corner of the room.

Reliability
The structures are strong and robust to ensure the product operation life.

Versatile
Multiple rooms can be cooled together by just using one unit of MDB.

Application Information

General Installation Guide

System Configuration

The standard controller board (W2) comes with a VALVE jumper and a HEAT jumper. The system can be configured as the jumper selection listed below:

	HEAT Jumper	VALVE Jumper
Heatpump Mode & Valve Application	√	√
Heatpump Mode & Valveless Application	√	X
Cooling Mode & Valve Application	X	√
Cooling Mode & Valveless Application	X	X

√ Jumper Remained X Jumper Removed

CAUTION !

Disconnect the power supply to the unit before attempting to connect the wiring

VALVE & HEAT Jumper Location

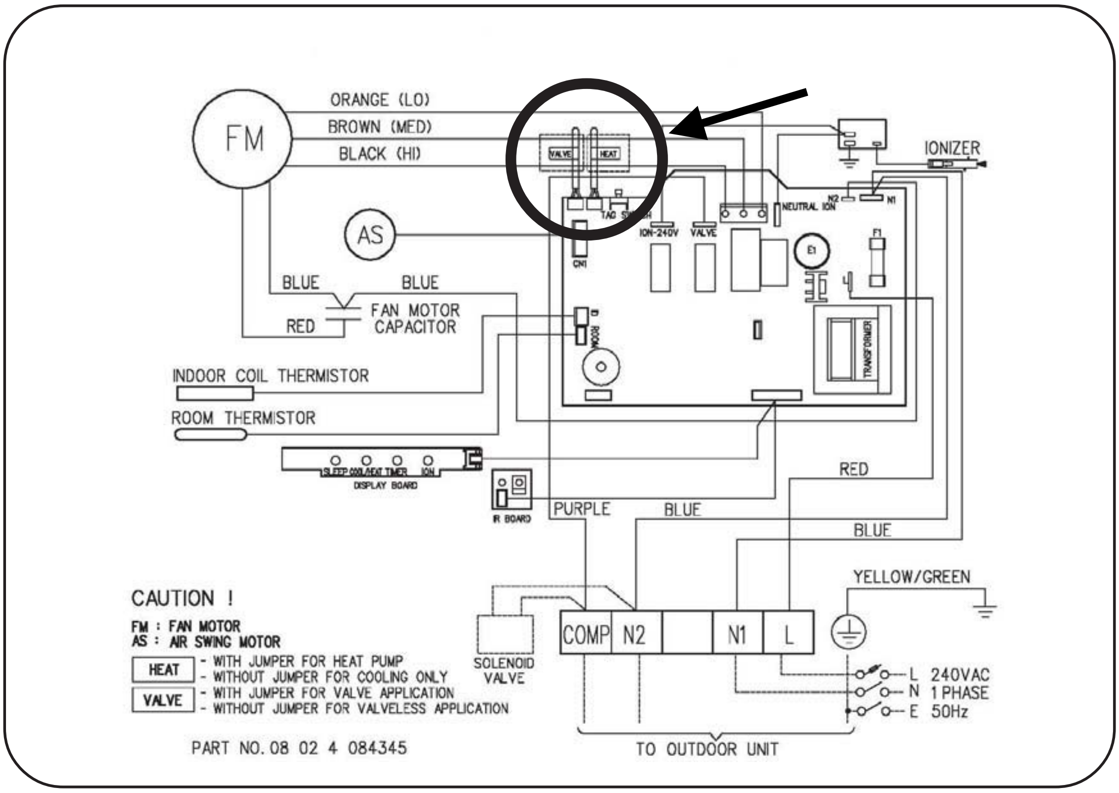
Model: MWM - GW / 301W

1. VALVE jumper is plugged into JVLV connector on the emergency switch board.
2. HEAT jumper is plugged into JMODE connector on the emergency switch board.

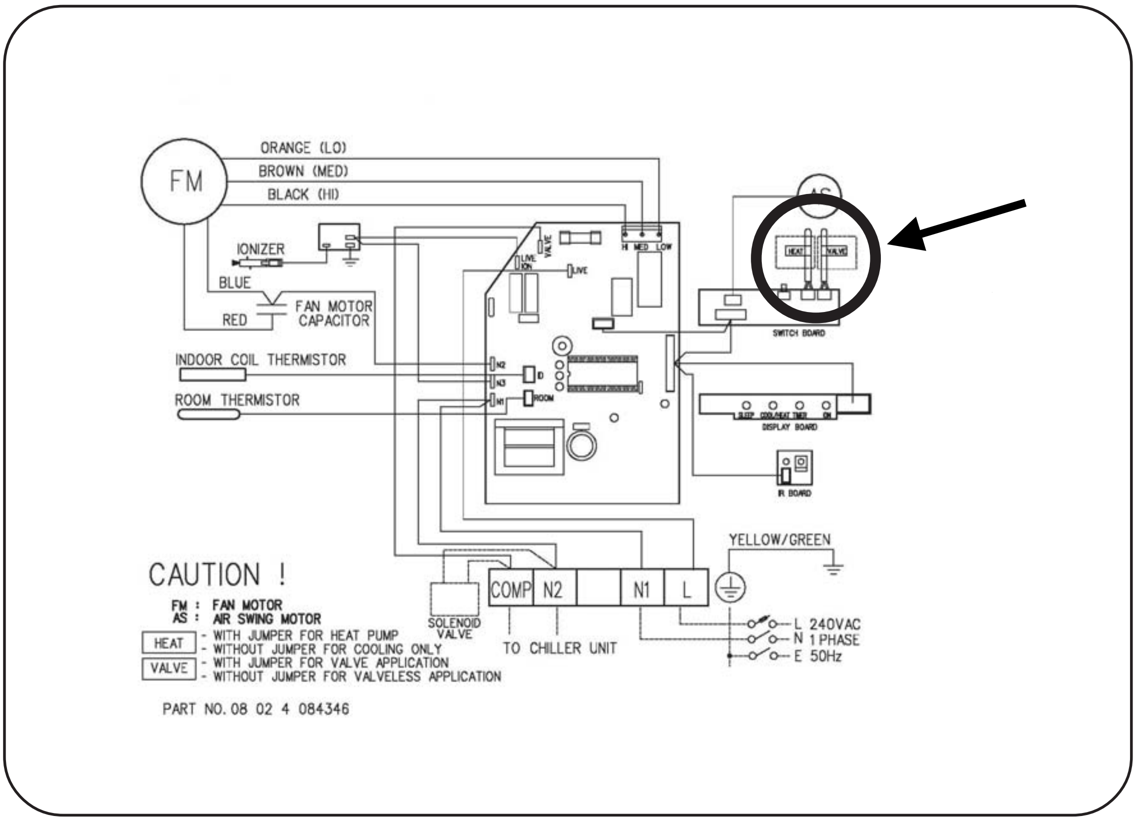
Model: MCK-AW/AWH/CW, MCM-DW/CBW/EW and MCC-CW

1. VALVE jumper is plugged into JVLV connector on the main board.
2. HEAT jumper is plugged into OD connector on the main board.

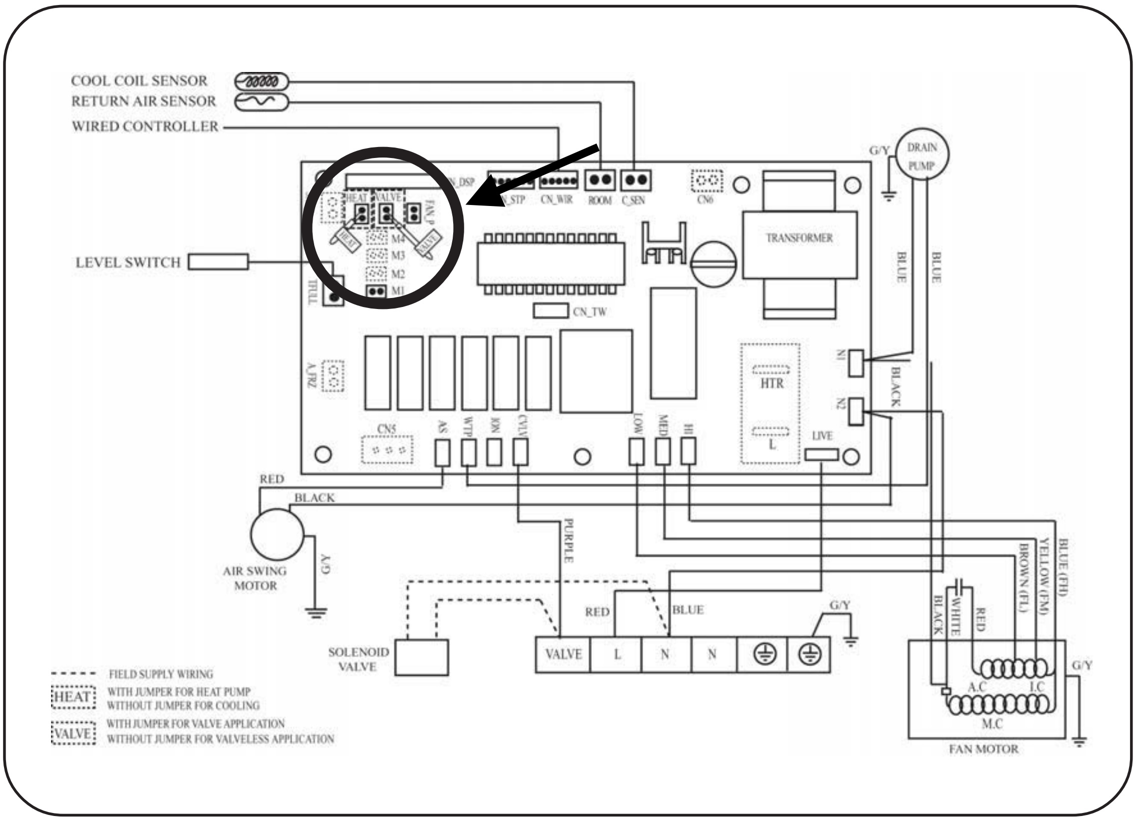
Model : MWM 007 / 010 / 015GW (IONIZER)



Model : MWM 020 / 025GW (IONIZER)

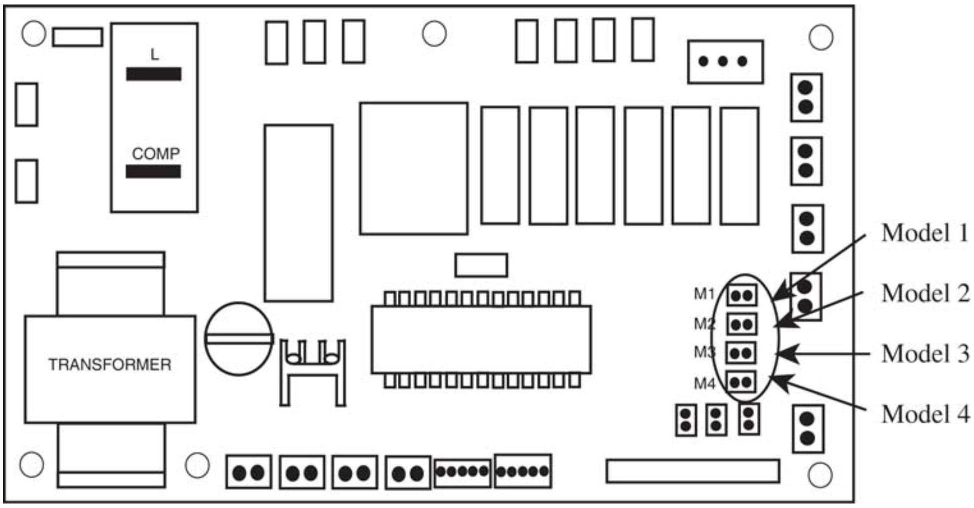


Model : MCM Series / MCC Series / MCK-AW/CW

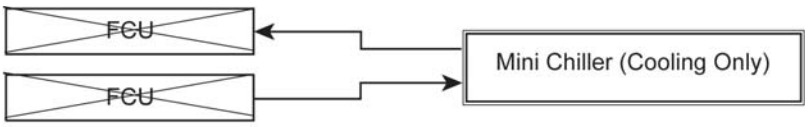
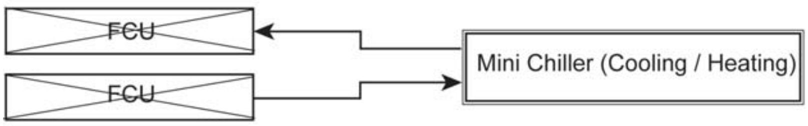
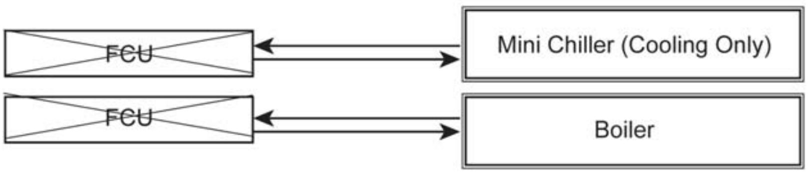
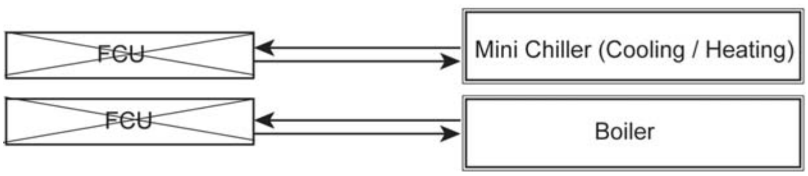


MCK-AWH 4 pipes system controller board setting

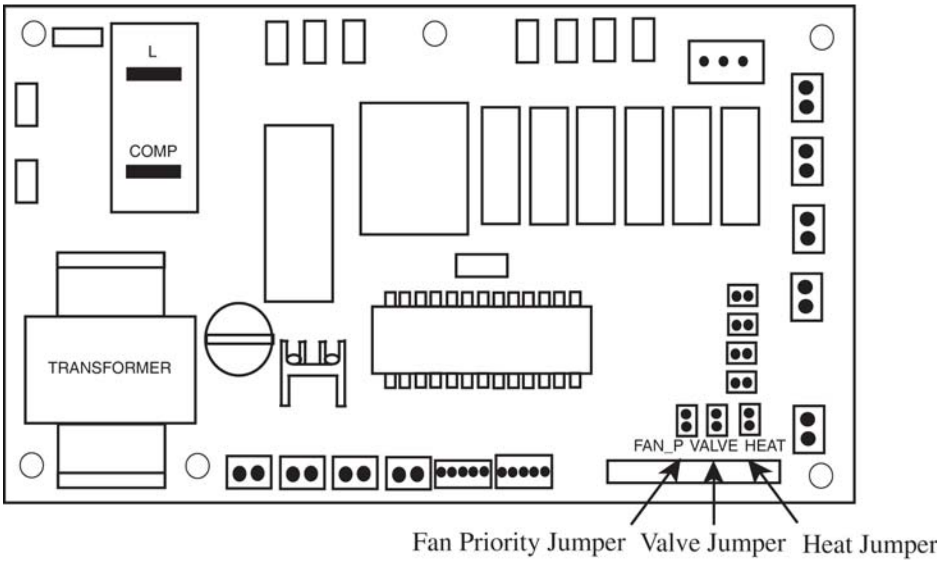
A) Model selection



The standard controller board (W2.0) comes with a default setting for model selection. Please select the model accordingly by using jumper.

System	Model	Function
2 Pipe System	M1 - Model 1	Cooling or Heating 
	M2 - Model 2	Cooling or Heating with Auxiliary Heater 
4 Pipe System	M2 - Model 2	Cooling Only with Boiler 
	M4 - Model 4	Cooling or Heating with Boiler 

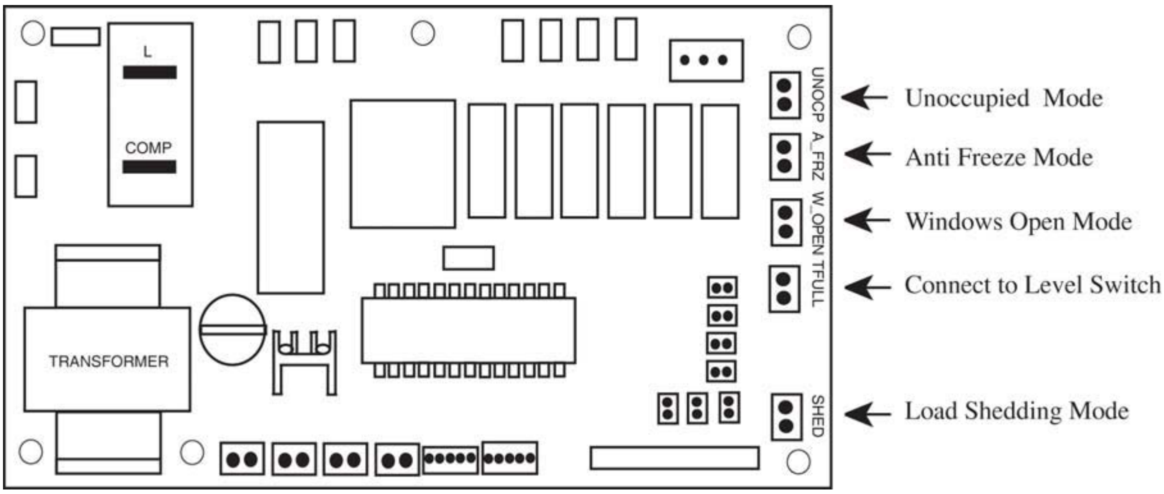
B) Valve, Heat and Fan priority selection



Jumper	With Jumper (Default)	Without Jumper
Fan Priority Jumper	User set speed or lower fan if auto mode is selected	Fan stop when thermostat cut off
Heat Jumper	For Heat pump	For cooling only
Valve Jumper	For Valve control (Model 1,2,3 & 4)	For valveless control (Model 1 & 2)

C) Others

The controller board comes with other option.



i) Unoccupied Mode

If the dry contact is closed, the Unoccupied mode is activated and vice versa. When Timer On is active, system goes back to Occupied mode.
The dry contact connection points can be connected parallel with other fan coil unit (FCU) boards. If the dry contact is closed, Unoccupied mode will be activated on all fan coil units that are connected parallel as shown in figure below.

ii) Anti Freeze Mode

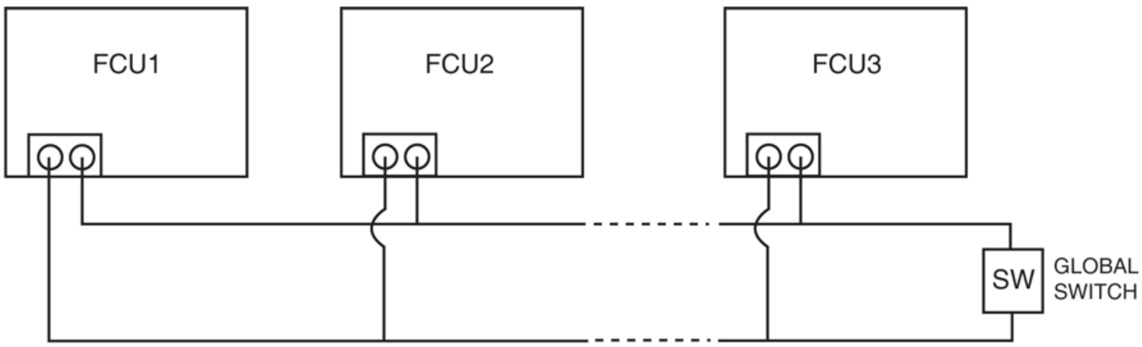
Anti Freeze operation has the highest priority among all unit operation. Anti Freeze operation will be activated only if dry contact is closed and vice versa.

iii) Window Open Mode

The dry contact connection points can be connected in parallel with other fan coil unit (FCU) boards. If the dry contact is closed, Window open mode will be activated on all the fan coil units which are connected in parallel as shown in figure below.

iv) Load Shedding

The dry contact connection points can be connected in parallel with other fan coil unit (FCU) boards. If the dry contact is closed, Load shedding mode will be activated on all the fan coil units which are connected in parallel as shown in figure below.



Global Unoccupied, Global Window Open and Global Load Shedding operation could also be activated via the network communication bus line by master controller with or without the above connection.

NOTE :

i) Auto Fan Mode is only applicable in Model 3 only. (Cooling only with Boiler)

ii) Fan mode is not available in valveless control.

iii) Wired handset (Netware and SLM) has an indoor room sensor. Avoid locating the wired handset at isolated places where room temperature reading will be inaccurate.

Water Piping Connection

The indoor unit is equipped with water outlet and inlet bare connection. There is an air-vent for air purging that is fitted at the outlet water header.

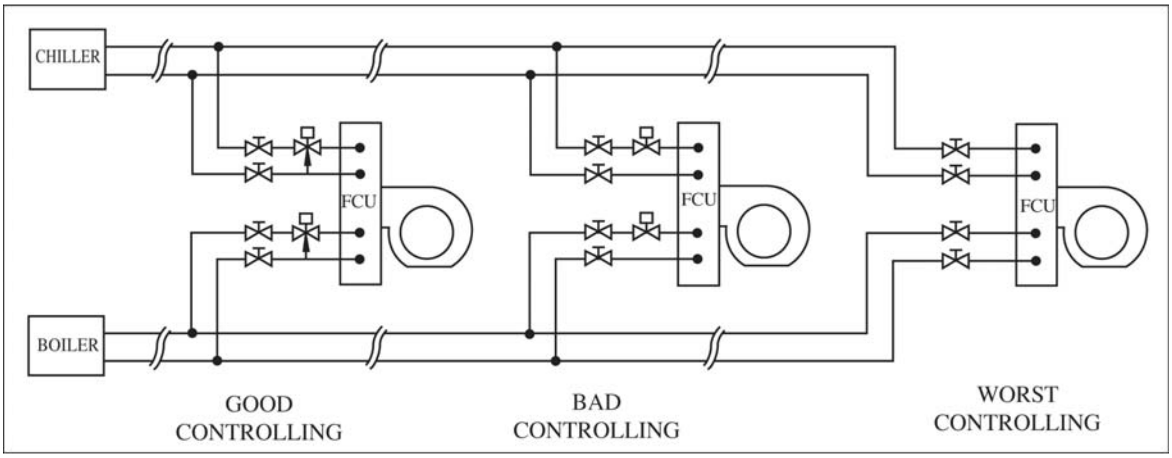
3 ways solenoid valve is required for cycling off or bypass the chilled water.

Black steel pipe, polyethrene pipe, PVC pipe and copper tube recommended in field installation.

All types of piping and connection must be insulated by polyurethane (ARMAFLEX type or equivalent) to avoid condensation.

Do not use contaminated or damaged pipe and fitting for installation.

Some main fitting components are needed in the system to enhance the capacity and ease of service, such as gate valve, balancing valve, 2 ways or 3 ways solenoid valve, filter, strainer etc.



Preliminary Site Survey

Electrical supply and installation is to conform to LOCAL AUTHORITY's (e.g. National Electricity Board) CODES and REGULATIONS.

Voltage supply fluctuation must not exceed ± 10% of rated voltage. Electricity supply lines must be independent of welding transformers which can cause supply fluctuation.

Ensure that the location is convenient for wiring and piping.

Mounting

For ceiling mounted models, locate a position where piping and ducting work can be kept to a minimum. Ensure that overhead supports are strong enough to hold the unit's weight. Position hanger rods and check for alignment with the unit. Check that hangers are secure and that the base of fan coil unit is level in two horizontal positions.

Piping

Drain and water piping must be accurately connected.

Please refer to "Specification Sheet" for piping sizes.

Piping Support

All water mains must be adequately supported to carry the necessary weight involved, provisions must be made by the installing contractor to allow for adequate free movement of all vertical and horizontal risers and run outs. Due to the fact that cold water will be circulated through the water mains, a sizeable movement of the water mains can be expected due to contraction. If for example, the piping is rigidly supported with no provision for movement, it is very possible that the tubing of fitting may be broken causing water leakage in the conditioned spaces throughout the building.

Coil Venting

Each standard basic unit coil is equipped with a manually operated air vent which is installed at the end of a small copper line leading into the highest point of the coil. By means of this valve, air may be vented manually, from the coil to keep it operating at full capacity. When water is first introduced into a coil, air is sometimes trapped in the coil tubing. This trapped air will reduce cooling capacity and create "Bubbling" or "Clanking" noise within the units. To release air trapped in the coil, press the air vent head to allow air to flow out of the air vent opening. Release when a steady stream of water appear.

Electrical Connection

As wiring regulations differ from country to country, please refer to your LOCAL ELECTRICAL CODES for field wiring regulations and ensure that they are complied with. Besides, take note of the following general precaution:

1) Ensure that the rated voltage of the unit corresponds to the name plate before commencing wiring work.

2) Provide a power outlet to be used exclusively for each unit and a power supply disconnect and a circuit-breaker for over-current protection should be provided in the exclusive line.

3) The unit must be EARTH to prevent possible hazards due to insulation failure.

4) All wiring must be firmly connected.

General Operation Guide

Start-Up
The following procedure must be completed before any attempts is made to put the entire system Into operation:

1) Piping connections completed.
2) Electrical connections completed.
3) Duct connections completed.
4) Auxiliary drain pans in position where required.
5) Drain line draining into drain pans.
6) Filters correctly installed and free of construction debris.
7) Motor-blower assembly rotates freely.
8) Unit Hydro-statically tested and air vented.

Starting The Fan Coil Unit
1) Turn on the switch of water pump.
2) Start water chiller.
3) Operate the fan coil unit by turning on the fan and set the control switch to get the desired speed.
4) Inspect the duct and piping condition and rectify problem (e.g. vibration, noise, etc.) if exist.

Servicing And Maintenance
Fan coil units are designed to operate continuously with minor routine maintenance. Since fan coil units cool the discharging forced air, the efficiency with which the units operate is directly related to the amount of air passing through the coil.

Air Filters
The function of the air filters is to remove foreign matter such as dirt, soot, pollen and certain other impurities from the air passing through it. A clogged or dirty filter not only fails to do the job for which it is designed, but restricts the flow of air over the coil.

The importance of cleaning the filter before it becomes clogged must be greatly stressed. The frequency with which a filter should be cleaned will depend upon the amount of dust and foreign material that enters a unit, and this depends upon location and situation.

The washable viledon or saranet filter may be cleaned by tapping the filter on a solid surface to dislodge heavy particles. Wash under stream of warm water, with detergent if necessary. Dry it thoroughly before replacing.

Fan Motor
The fan motor is pre-lubricated and sealed at the factory. Therefore, no lubricating maintenance is required.

Coils
Clean coil unit by brushing between fins with a nylon brush. Brushing should be followed by cleaning with a vacuum cleaner. The coil may also be cleaned by using a high pressure air hose and nozzle if a compressed air source is available. It should be pointed out that if suitable air filter is used and taken care of properly, the coils need no cleaning.

Drain Pipe
The drain pipe should be checked before operation of unit is begun. If it is clogged, steps should be taken to clean the debris so that condensate will flow out easily.

Replacement Of Parts
Replacement of parts are available through your local dealers. When ordering parts, you must supply
1) Model name of the unit.
2) Serial number of the unit.
3) Part name and number.

Controller

Type Of Controller Vs Type Of Fan Coil

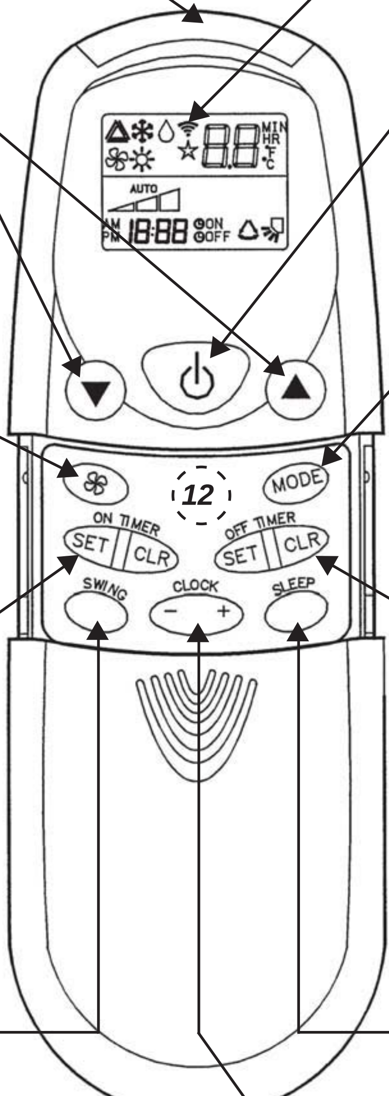
MODELS	STANDARD CONTROLLER	OPTIONAL CONTROLLER
MWM - GW	G11 (Wireless)	NETWARE3 / SLM3 (Wired)
MWM 301W	G7 (Wireless)	NETWARE3 / SLM3 (Wired)
MCK - AW / AWH / CW	G7 (Wireless)	NETWARE3 / SLM3 (Wired)
MCM - DW / CBW / EW	G7 (Wireless)	NETWARE3 / SLM3 (Wired)
MCC - CW	NETWARE3 / SLM3 (Wired)	-
MDB - BW	Without Controller	

Self Diagnosis Table

Error Indication	Cool LED	7 Segment Display
Room Sensor error (short/open)	Blinks 1 times	E1
Pipe Water Sensor Error (short/open)	Blinks 2 times	E2
Water Pump Error	Blinks 6 times	E6
Pipe Water Temperature Fault	Blinks 5 times	E5
* Window Open Activated	Blinks 3 times	-
* Antifreeze Mode Activated	Blinks 7 times	-
* Load Shedding Activated	Blinks 8 times	-

* Only applicable for 4-pipe system

Operation Guide For G7



1 Transmission source

- The source where the signal will be transmitted

2 Signal transmission indication

- Blink to confirm the last setting has been send to the unit.

3 On/Off button

- Press once to start the air conditioner.
- Press again to stop the unit.

4 Temperature setting

- To set the desired room temperature, press the button to increase or decrease the set temperature.
- The temperature setting range is from 16°C to 30°C (Optional setting 18°C to 30°C).
- Press both buttons simultaneously to toggle the temperature setting between °C and °F.

5 Operation mode

- Press the MODE button to select the type of operating mode.
- For cooling only unit, the available modes are : COOL, DRY & FAN.
- For heat pump unit, the available modes are : AUTO, COOL, DRY, FAN & HEAT.

6 Fan speed selection

- Press the button until the desired fan speed is achieved.

7 ON timer setting

- Press the SET button will activate the on timer function.
- Set the desired on time by pressing the SET button continuously. If the timer is set to 7.30am, the air conditioner will turn on at 7.30 sharp.
- Press the CLR button to cancel the on timer setting.

8 OFF timer setting

- Press the SET button will activate the off timer function.
- Set the desired off time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting.

9 Automatic air swing

- Press the SWING button to activate the automatic air swing function.
- To distribute the air to a specific direction, press the SWING button and wait until the louver move to the desired direction and press the button once again.

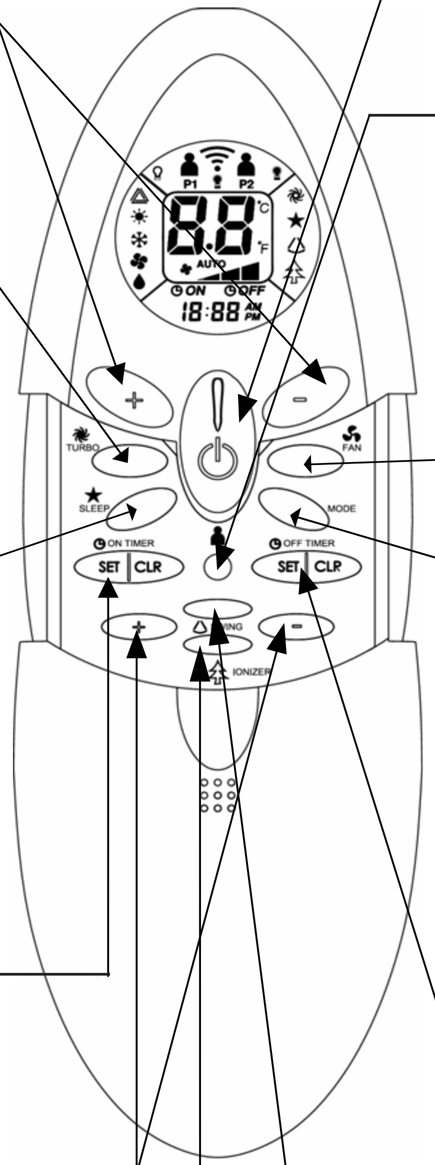
10 Sleep mode setting

- Press the button to activate sleep mode. This function is available under COOL, HEAT & AUTO mode.
- When it is activated in COOL mode, the set temperature will be increased 0.5°C after 30mins, 1°C after 1 hour and 2°C after 2 hours.
- When it is activated in HEAT mode, the set temperature will be decreased 1°C after 30mins, 2°C after 1 hour and 3°C after 2 hours.

11 Clock time setting

- Press button + or - to increase or decrease the clock time.

G11 Remote Controller



Temperature Setting

- To set the desired room temperature, press the button to increase or decrease the set temperature.
- The temperature setting range is from 16°C to 30°C
- Press both buttons simultaneously to toggle the temperature setting between °C and °F

Turbo Mode

- Press the TURBO button to achieve the required set temperature in a short time.

Sleep Mode

- Press the button to activate sleep mode. This function is available under COOL, HEAT & AUTO mode.
- When it is activated in COOL mode, the set temperature will be increased 0.5°C after 30mins, 1°C after 1 hour and 2°C after 2 hours.
- When it is activated in HEAT mode, the set temperature will be decreased 1°C after 30mins, 2°C after 1 hour and 3°C after 2 hours.

ON Timer Setting

- Press the SET button will activate the on timer function.
- Set the desired on time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting

Clock Time Setting

- Press button + or - to increase or decrease the clock time.

Ionizer

- Press the button to activate the negative Ion function, which will refresh the indoor air effectively.

On/Off Button

- Press Once to start the air conditioner
- Press again to stop the unit

Personalised Setting

- Press and hold the button for 3s to initiate personalized setting.
- Set the individual setting e.g. MODE, SET TEMP or FAN SPEED and leave for 4s to save
- 2 groups of settings are allowed to stored in the handset

Fan Speed Selection

- Press the button until the desired fan speed is achieved.

Operating Mode

- Press the MODE button to select the type of operating mode.
- For Cooling only unit, the available modes are: COOL, DRY & FAN.
- For Heatpump unit, the available modes are: AUTO, COOL, DRY, FAN & HEAT.

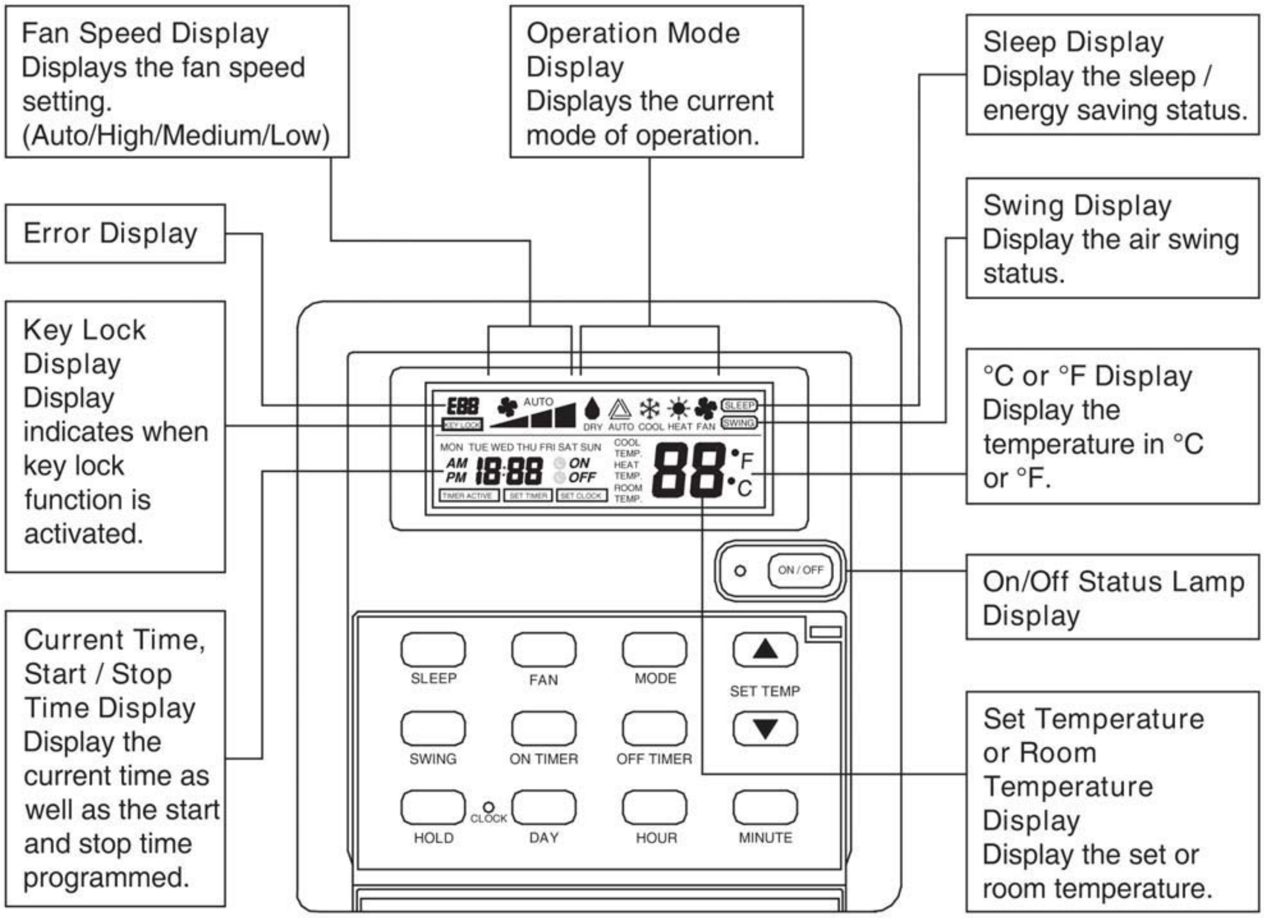
OFF Timer Setting

- Press the SET button will activate the off timer function.
- Set the desired off time by pressing the SET button continuously.
- Press the CLR button to cancel the off timer setting

Automatic Air Swing

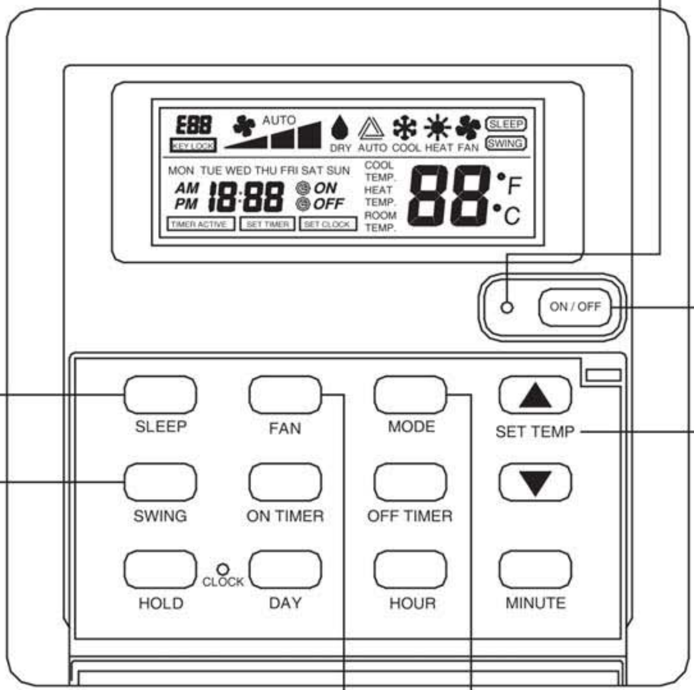
- Press the SWING button to activate the automatic air swing function.
- To distribute the air to a specific direction, press the SWING button and wait until the louver move to the desired direction and press the button once again.

Netware3 Wired Controller



Operating Lamp

On / Off
- Starting operation:
  When the unit is off, press the ON/OFF button. The operation LED lights and the unit will be turned on.
- Stopping operation:
  When the unit is on, press the ON/OFF button. The operation LED is extinguished and controls are turned off.



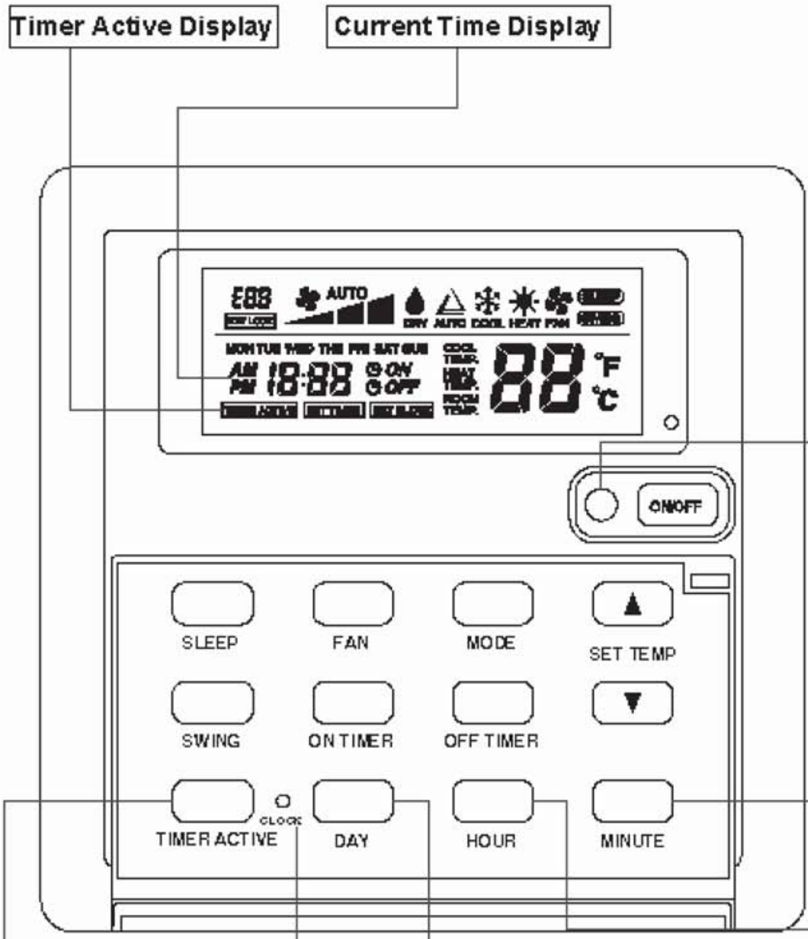
Set Temperature
- Press this button to set the temperature. By pressing up or down once, temperature changes by 1°C (or 1°F).
- The temperature range is 16°C to 30°F (60°F to 85°F).
- In FAN mode, temperature cannot be set.
- Pressing up and down buttons simultaneously will toggle the temperature unit between °C and °F.
- When set temperature button is pressed, the set temperature will be displayed for 5 seconds. After that, room temperature will be displayed.

Swing
Press SWING button to activate the air sweep function.

Sleep
Press SLEEP button to activate the sleep or energy saving mode.

Fan
Press FAN button to select Auto, High, Medium or Low fan speed.

Mode
Press MODE button to select operation mode from Cool, Heat, Auto, Dry and Fan. The display will show the selected mode.



Key Lock

- This feature protects the controls from being tempered with by children or unauthorized persons.
- To activate, press MINUTE button three times consecutively, "KEY LOCK"symbol will appear on the LCD display.
- During this time, ON/OFF button and FAN button can be used.
- To cancel this feature, press the MINUTE button again three times consecutively.

Minute

When the control is in set clock or set timer mode, pressing the MINUTE button will change the set minute.

Hour

When the control is in set clock or set timer mode, pressing the HOUR button will change the set hour.

Day

When the control is in set clock or set timer mode, pressing the DAY button will change the set hour.

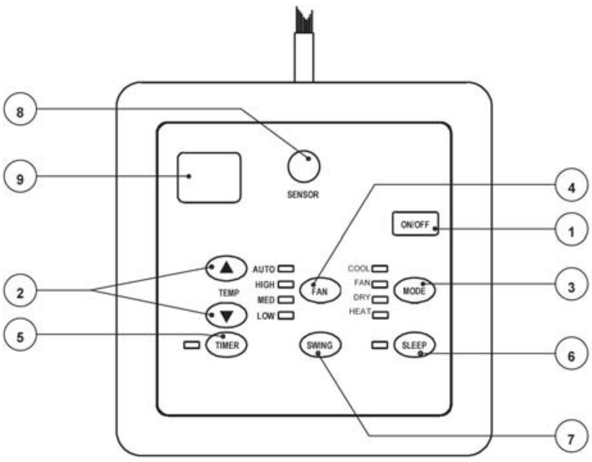
Clock

- Press button once to set the clock mode.
- Press button again to disable the clock mode.
- When the clock mode is activated, the time and date can be set or changed by pressing the DAY, HOUR & MINUTE button.

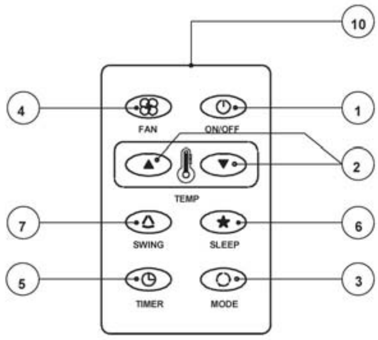
Timer Active

- Press button until "TIMER ACTIVE" appears to activate the timer.
- The symbol will indicate Event 1, Event 2 and/or Event 3 timers are active.
- To clear the timer setting, press and hold TIMER ACTIVE button for 2 to 3 seconds until the word "TIMER ACTIVE" is no longer display.
- To resume the timer setting after the timer has been deactivated, press and hold TIMER ACTIVE button again for 2 to 3 seconds until the word "TIMER ACTIVE" is displayed.

SLM3 WIRED CONTROLLER



SLM3



AC5300

1. "ON/OFF" switch
- Press to start the air conditioner unit.
- Press again to stop the unit.

2. Temperature setting
- Set the desired room temperature.
- Press button to increase or decrease the set temperature. Setting range are between 16°C to 30°C (60°F to 80°F).

3. Operation Modes
- Press the "mode" button for select the type of operating mode.
  - Cooling Only :
    COOL, FAN, DRY
  - Heat Pump :
    COOL, FAN, DRY, HEAT

4. Fan Speed selection
- Press the button until the desired fan speed is achieved.

5. Timer
- Press the set button to select the switch timer of the air conditioner unit (the setting range is between 1 to 15 hours).

6. "Sleep" mode
- Press button to activate the sleep function. This function can only be activated under "cool" or heating mode operation. When it is activated under "cool" mode operation, the set temperature will increase 0.5°C after 30 minutes, 1°C after 1 hour and 2°C after 2 hours. If it is activated under "HEAT" mode operation, the set temperature will be decreased 0.5° C after 30 minutes, 1° C after 1 hour and 2° C after 2 hours.

7. Air Swing
- Press button to activate the automatic air swing function.

8. Sensor
- Infra red sensor to receive signals from wireless controller.

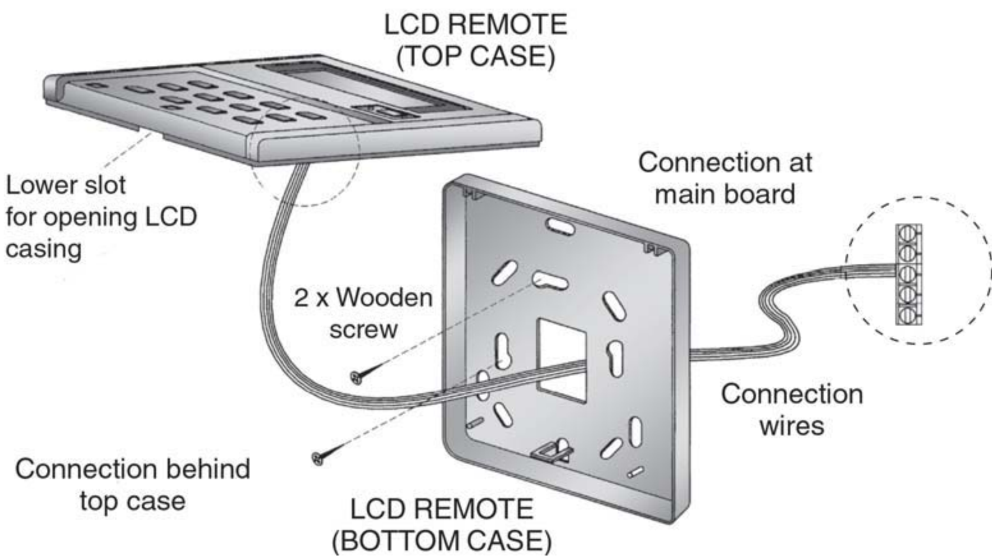
9. LED display
- To display the set temperature (in º C) and timer delay setting (in hours).

10. Transmission source
- To transmit signals to the air conditioner.

INSTALLATION OF LCD REMOTE CONTROLLER

STEP-BY-STEP GUIDE

i) First, open up the casing of the LCD remote controller into its top and bottom case using a screwdriver. To do this, insert the screwdriver into the lower slot and slide it in the outward direction.
ii) Fix the bottom case onto the wall with the 2 wooden screws provided. Then, insert the 4 connecting wires (from the main board) through the slot on the lower center of the case as shown below.
iii) Connect one end in each of the 3 wires to the terminal block behind the top case as illustrated.
iv) To select cooling only model or heatpump model, some adjustment required in the dip switch setting.
v) Fasten back the top and bottom case into place. Hook the two upper claws into their respective slots and snap the lower part shut.



Dip switch setting for model selection

Pin	Function	Remarks
JH & JD	RESERVE	JH-OFF, JD-OFF
	COOL, DRY, FAN	JH-OFF, JD-ON
	COOL, DRY, FAN, HEAT	JH-ON, JD-OFF
RTC	NO REAL TIME CLOCK	RTC-OFF
	REAL TIME CLOCK	RTC-ON
NO DRY	WITHOUT DRY FUNCTION	NO DRY-ON
	DRY FUNCTION	NO DRY-OFF

Sound Data

Sound Pressure Level

Wall Mounted Split Type

Model	Speed	1/1 Octave Sound Pressure Level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
		125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz		
MWM007GW	HIGH	32	34	38	37	32	23	15	40	36
	MEDIUM	27	30	34	32	26	17	14	35	31
	LOW	24	27	29	26	20	13	13	29	24
MWM010GW	HIGH	28	34	37	36	31	22	13	39	35
	MEDIUM	27	30	33	31	25	17	12	34	30
	LOW	24	26	28	25	19	12	11	28	23
MWM015GW	HIGH	30	35	39	38	33	25	15	42	37
	MEDIUM	28	31	34	33	26	18	13	36	32
	LOW	24	26	28	26	20	13	12	29	24
MWM020GW	HIGH	37	44	42	37	34	25	15	43	37
	MEDIUM	34	40	39	34	30	21	14	40	34
	LOW	30	35	35	30	26	18	13	35	30
MWM025GW	HIGH	41	48	47	43	40	32	23	49	43
	MEDIUM	39	44	43	39	35	28	20	44	38
	LOW	37	41	40	36	32	25	19	42	35
MWM301W	HIGH	42	46	45	44	41	35	28	49	43
	MEDIUM	40	45	44	43	35	33	27	47	42
	LOW	37	43	43	40	35	30	26	45	39

Microphone position : MWM-FW -- 1 m in front of the unit and 0.8 m below the vertical centre line of the unit. (JIS C 9612)
MWM301W -- 1 m in front and 1 m below the air discharge opening of the unit (JIS B 8615)

Ceiling Exposed Split Type

Model	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall	Noise
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	(dBA)	Criteria
MCM020DW	High	45	46	47	46	41	38	29	50	45
	Medium	42	43	45	42	38	34	24	47	41
	Low	36	37	39	35	31	24	15	40	34
MCM025DW	High	48	51	51	50	45	41	33	54	49
	Medium	47	50	50	49	44	40	32	53	48
	Low	45	47	48	47	41	36	27	50	46
MCM030DW	High	45	48	48	47	43	33	24	51	46
	Medium	44	47	47	46	42	32	23	50	45
	Low	43	45	45	44	39	29	20	48	43
MCM040DW	High	51	53	51	50	47	37	30	54	49
	Medium	48	51	50	49	46	36	28	53	48
	Low	46	50	49	48	44	35	27	52	47
MCM050DW	High	51	53	51	50	47	37	30	54	49
	Medium	48	51	50	49	46	36	28	53	48
	Low	46	50	49	48	44	35	27	52	47

Microphone position : MCM 20/25DW -- 1 m in front of the unit and 0.8 m below the air discharge opening. (JIS C 9612)
MCM 30/40/50DW -- 1 m in front of the unit and 1 m below the air discharge opening. (JIS B 8615)

Model	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall	Noise
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	A (dBA)	Criteria
MCM007CBW	High	26	34	38	42	38	35	23	45	41
	Medium	23	29	36	39	34	31	18	42	38
	Low	19	26	33	34	31	23	12	37	33
MCM010CBW	High	27	35	39	43	39	36	24	46	42
	Medium	24	30	37	40	35	32	19	43	39
	Low	20	27	34	35	32	24	13	38	34
MCM015CBW	High	28	36	40	44	40	37	25	47	43
	Medium	25	31	38	41	36	33	20	44	40
	Low	21	28	35	36	33	25	13	39	35

Microphone position : 1m in front and 0.8m below the vertical centre line of the unit.

Ceiling Cassette Split Type

Model	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall	Noise
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	(dBA)	Criteria
MCK020AW / AWH	High	46	45	40	38	32	21	14	42	37
	Medium	44	43	37	33	28	18	12	39	32
	Low	43	42	35	31	26	17	11	37	31
MCK025AW / AWH	High	48	46	43	39	33	27	19	45	38
	Medium	45	43	40	35	29	21	15	42	35
	Low	43	42	38	32	27	19	14	40	33
MCK030AW / AWH	High	50	48	47	43	37	35	28	49	42
	Medium	48	45	43	38	32	31	27	45	38
	Low	46	43	41	35	30	30	26	43	36
MCK040AW / AWH	High	50	49	49	46	39	38	31	51	45
	Medium	48	47	47	43	36	34	25	48	42
	Low	46	45	46	41	34	30	23	46	41
MCK050AW / AWH	High	54	52	51	48	43	42	34	53	47
	Medium	52	50	50	46	41	40	32	52	46
	Low	51	49	49	45	39	39	31	50	45

Microphone position : MCK020/025AW/AWH -- 1.4m below the facia. (JIS C 9612)
MCK030/040/050AW/AWH -- 1.5 m below the facia. (JIS B 8615)

Model	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall	Noise
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	(dBA)	Criteria
MCK010CW	High	43	46	43	40	33	30	20	44	39
	Medium	42	44	42	39	32	28	19	43	38
	Low	41	43	40	37	30	25	17	42	36
MCK015CW	High	45	43	42	39	34	30	19	44	38
	Medium	44	42	40	38	33	28	17	42	37
	Low	43	41	39	36	31	25	16	41	35
MCK020CW	High	46	46	45	42	36	38	26	47	41
	Medium	45	46	43	41	35	37	23	46	40
	Low	43	44	42	39	33	35	20	44	38

Microphone position : 1.4m below the facia. (JIS C 9612)

Ceiling Concealed Fan Coil Unit

Model	Ext. Static (mmAq)	Speed	1/1 Octave Sound pressure level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
			125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
MCC010CW	5	High	33	30	30	29	22	16	10	33	27
	4	Medium	31	28	28	26	20	13	8	30	24
	3	Low	28	25	24	22	16	10	7	26	20
MCC015CW	5	High	39	36	34	32	27	18	11	37	31
	4	Medium	35	34	32	29	23	14	9	34	27
	3	Low	32	29	28	25	17	11	8	29	23
MCC020CW	5	High	42	39	36	34	28	22	17	38	33
	4	Medium	41	37	34	31	26	20	15	36	30
	3	Low	40	36	32	29	23	18	13	34	27
MCC025CW	5	High	42	41	37	34	31	29	23	40	33
	4	Medium	41	40	36	33	29	28	22	39	32
	3	Low	36	35	33	31	26	27	21	36	30
MCC028CW	10	Super High	48	45	42	38	34	29	26	44	37
	8	High	45	42	39	35	31	26	22	41	34
	7	Medium	42	38	37	32	28	22	17	38	32
	6	Low	36	33	33	27	23	16	11	34	27
MCC030CW	21	Super High	54	50	46	45	40	34	30	49	44
	17	High	50	45	43	42	37	31	26	46	41
	13	Medium	45	40	40	38	32	26	20	42	37
	9	Low	42	36	37	33	28	22	15	38	32
MCC038CW	14	Super High	56	57	53	50	46	41	36	55	49
	12	High	54	51	48	46	41	36	31	51	45
	11	Medium	51	48	46	45	37	32	26	48	44
	9	Low	47	45	44	41	34	28	22	45	40
MCC040CW	21	Super High	56	49	49	46	41	37	32	51	45
	18	High	54	47	47	45	39	35	29	49	44
	13	Medium	49	42	43	41	35	31	24	45	40
	9	Low	45	39	41	37	30	26	18	41	36
MCC050CW	18	Super High	56	50	50	49	44	38	33	53	48
	16	High	54	49	49	48	43	37	32	52	47
	14	Medium	53	47	46	47	40	35	29	50	46
	11	Low	51	45	44	44	36	32	26	47	43
MCC060CW	18	Super High	57	50	51	51	46	39	35	55	50
	16	High	55	49	49	50	44	37	33	53	49
	14	Medium	53	46	47	47	39	34	28	50	46
	10	Low	51	43	44	43	35	30	24	47	42

Microphone position : 1.4 m below the centre of the unit. (GB standard - GB/D17758)
Tested with 2m length duct at the air discharge outlet and air return inlet.

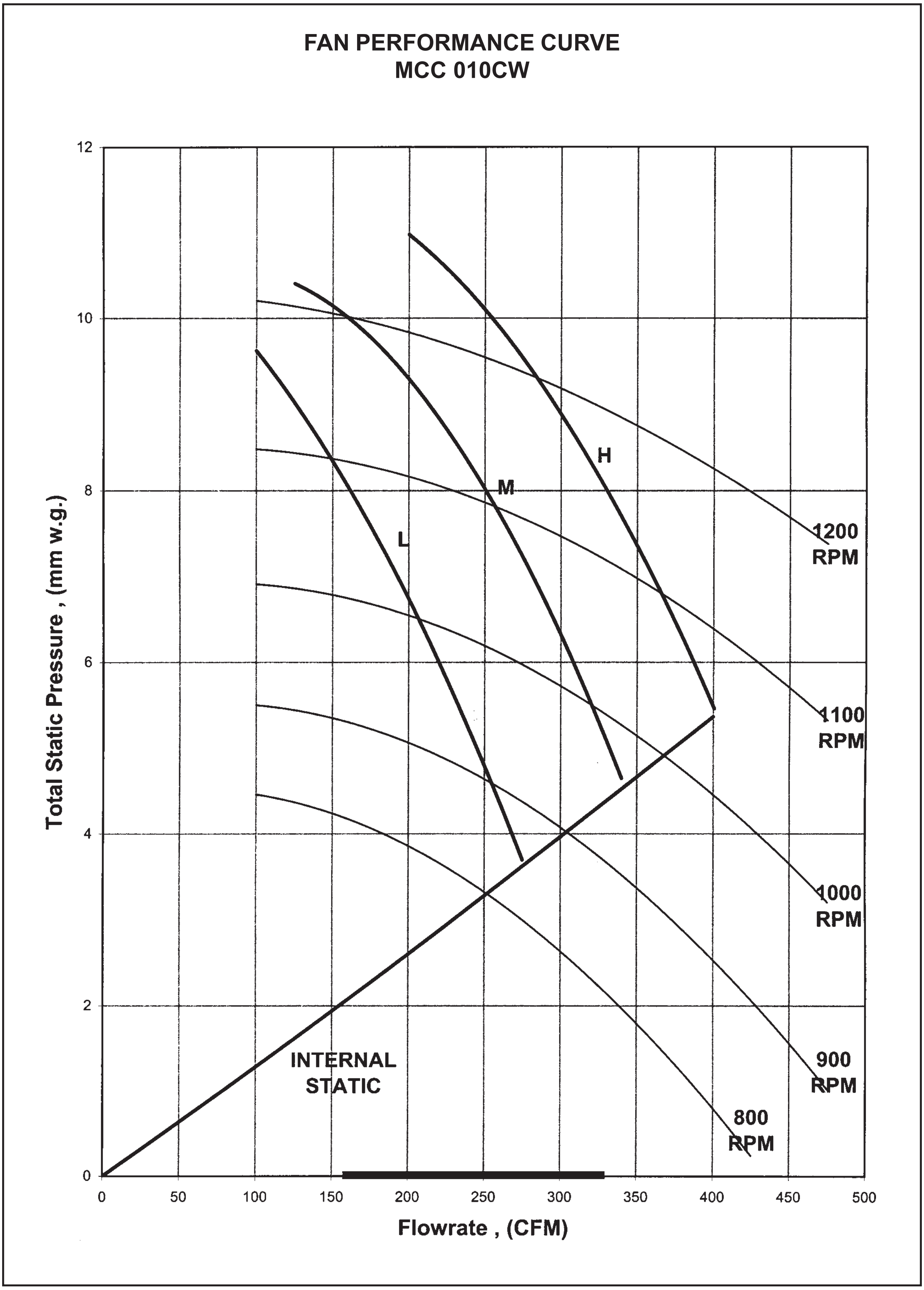
Ducted Split Fan Coil Unit

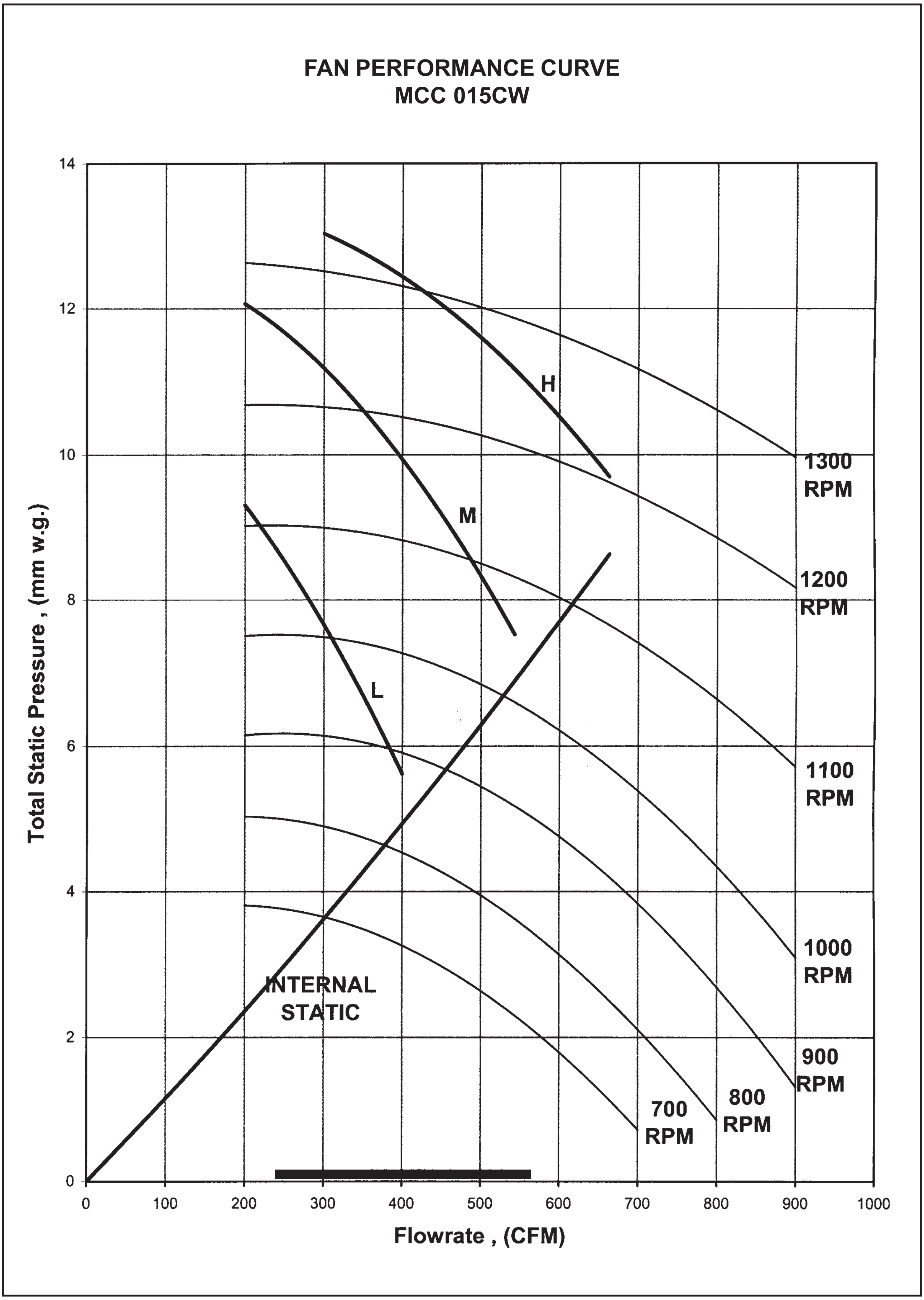
Model	1/1 Octave Sound Pressure Level (dB, ref 20μPa)							Overall (dBA)	Noise Criteria
	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz		
MDB075BW	54	50	46	44	41	36	26	49	43
MDB100BW	53	54	48	48	44	39	31	52	47
MDB125BW	53	51	50	45	44	38	29	52	46
MDB150BW	58	56	57	54	52	47	39	59	54

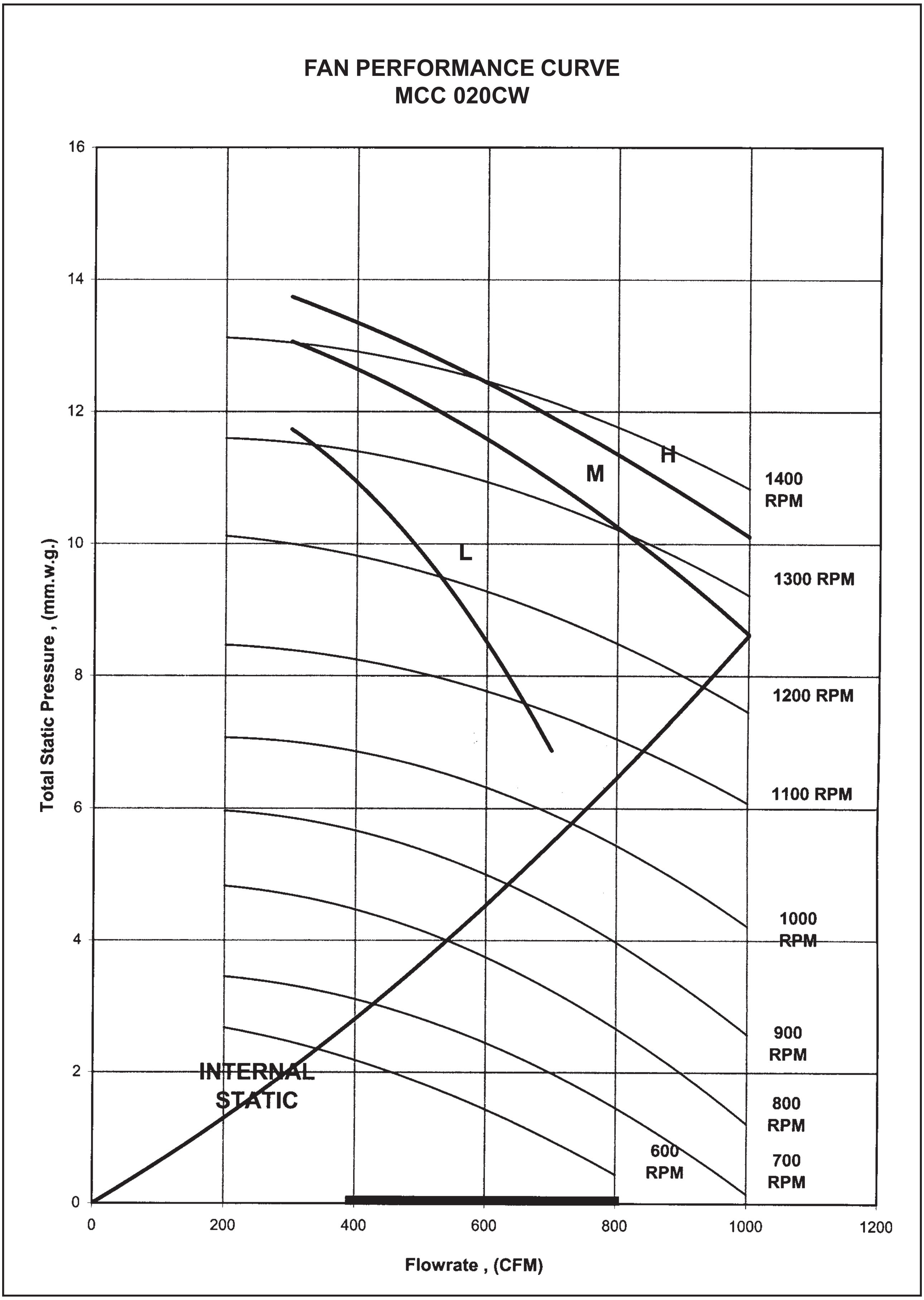
Microphone Position: MDB075/100/125/150BW, 1.4m below the unit (free return and the discharge air was ducted to adjacent room)

Selection Process

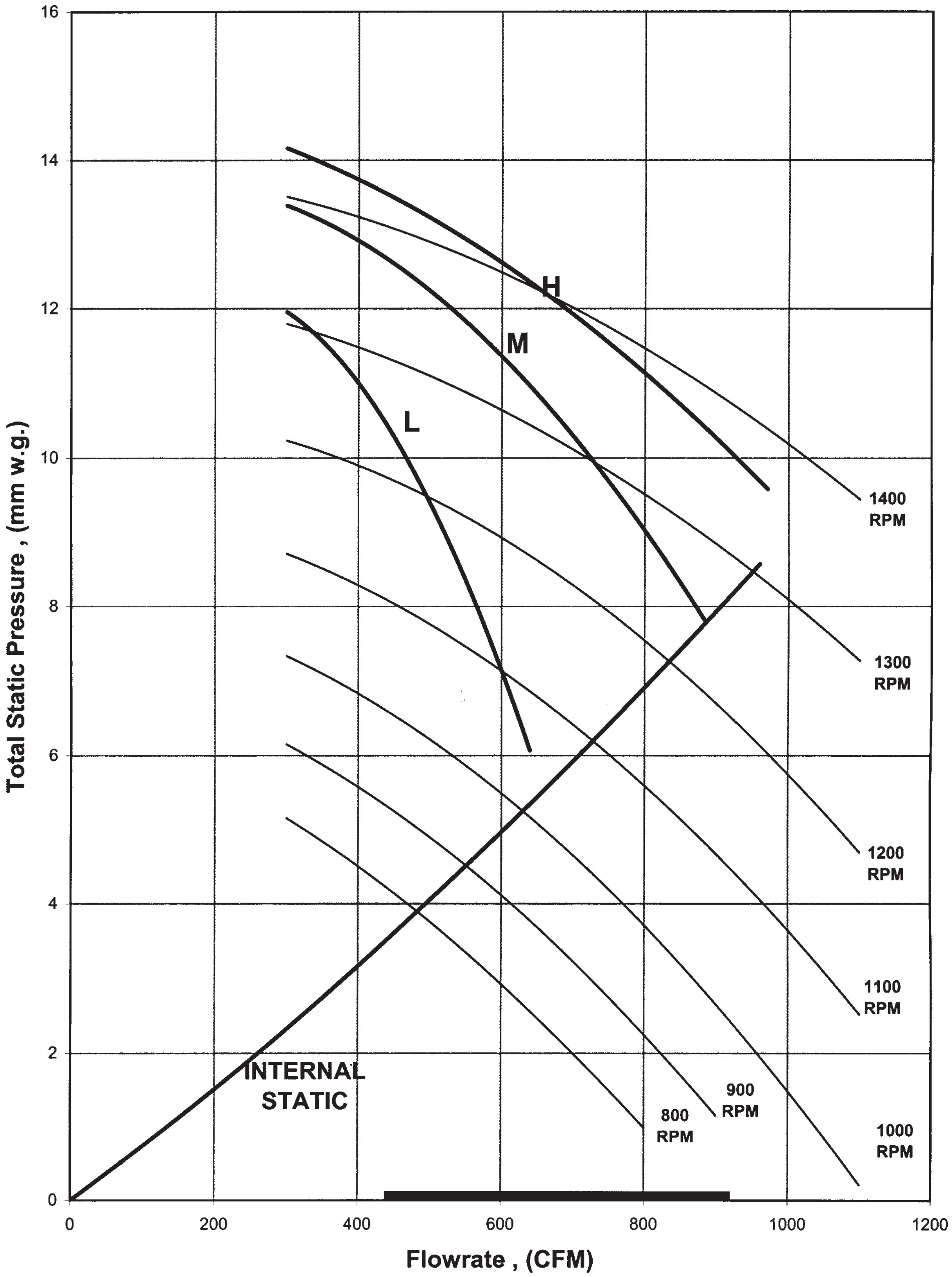
Fan Performance Curves

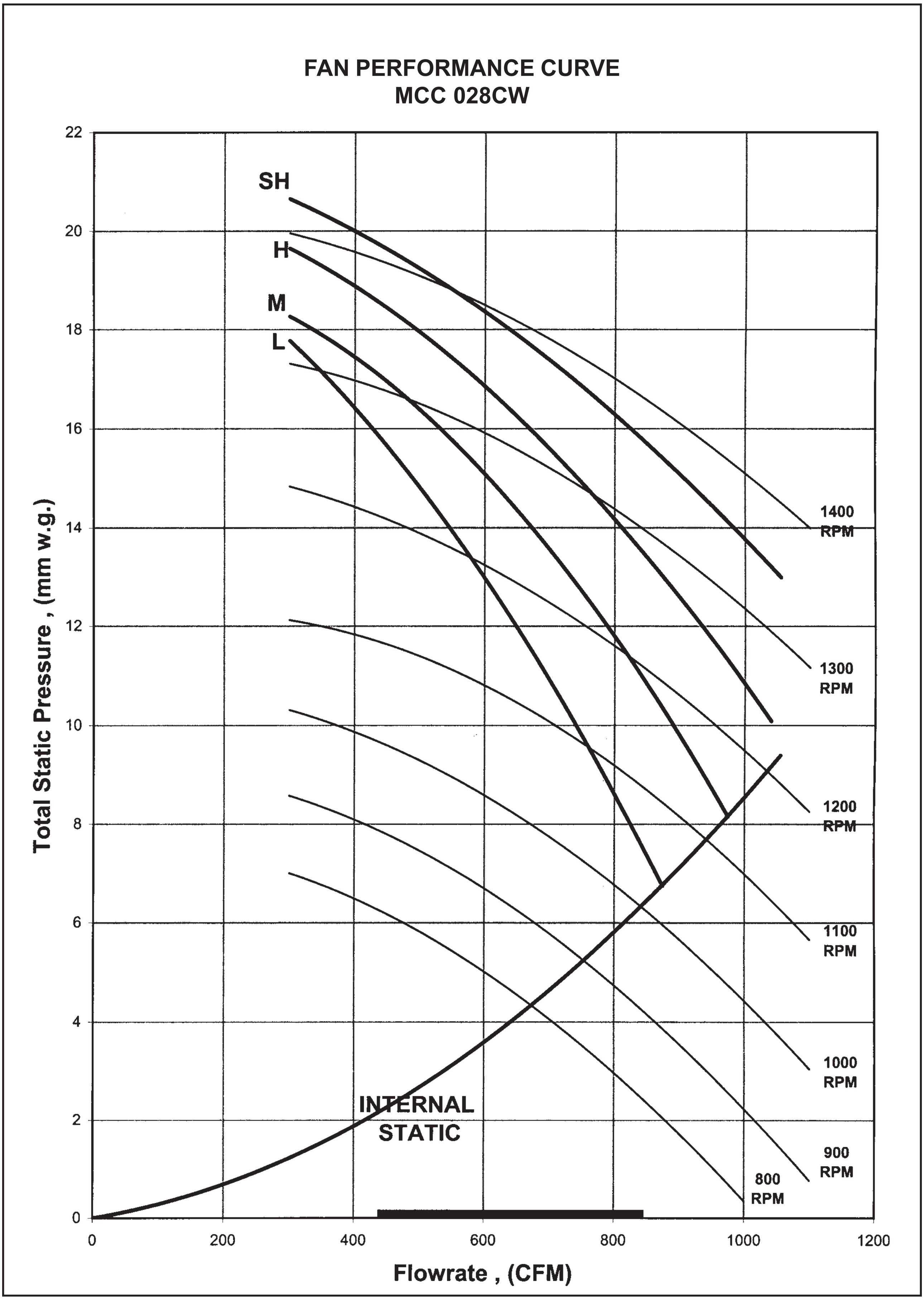


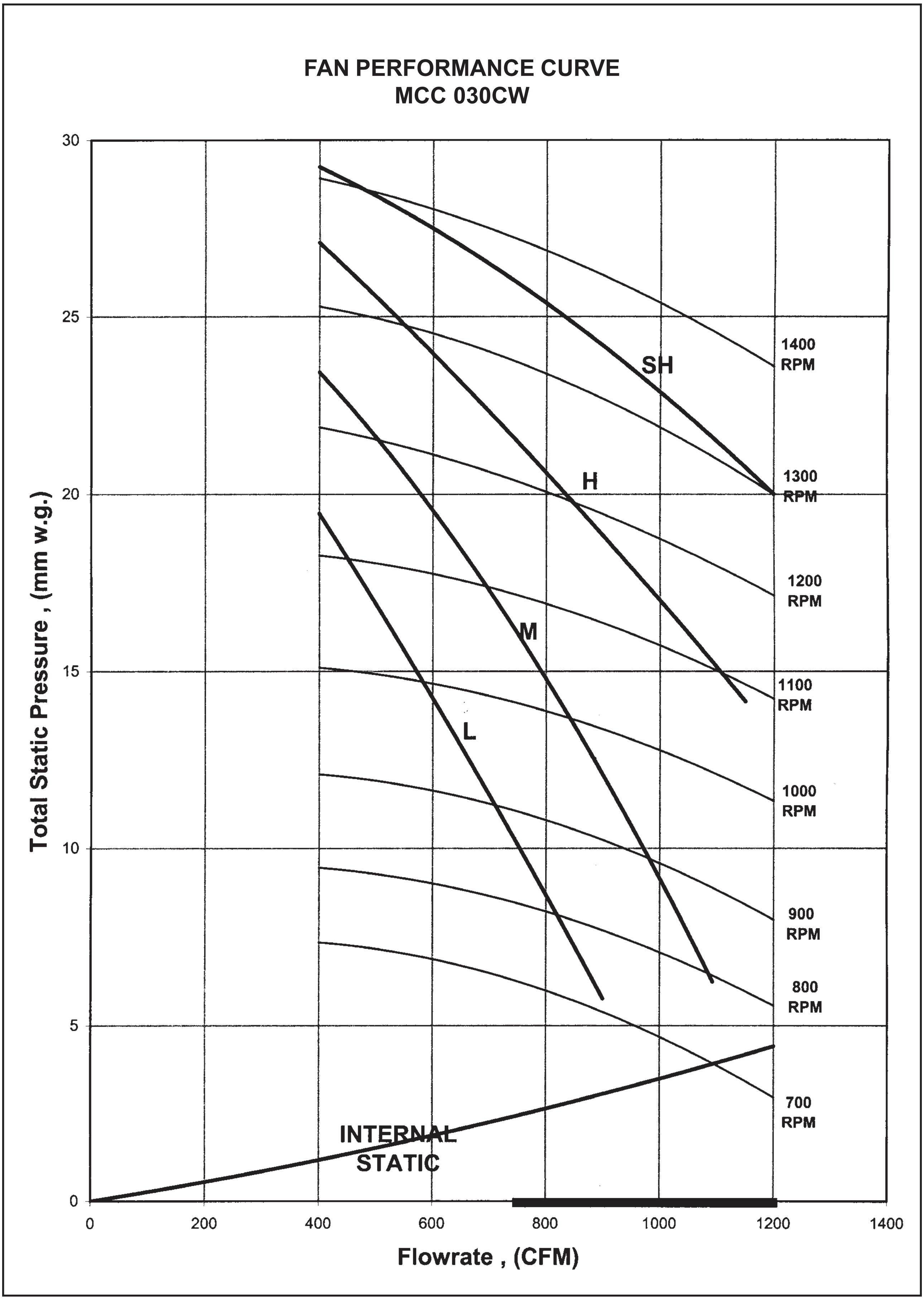

FAN PERFORMANCE CURVE
MCC 015CW
Total Static Pressure , (mm w.g.)
Flowrate , (CFM)
0
2
4
6
8
10
12
14
0
100
200
300
400
500
600
700
800
900
1000
H
M
L
INTERNAL
STATIC
1300
RPM
1200
RPM
1100
RPM
1000
RPM
900
RPM
800
RPM
700
RPM

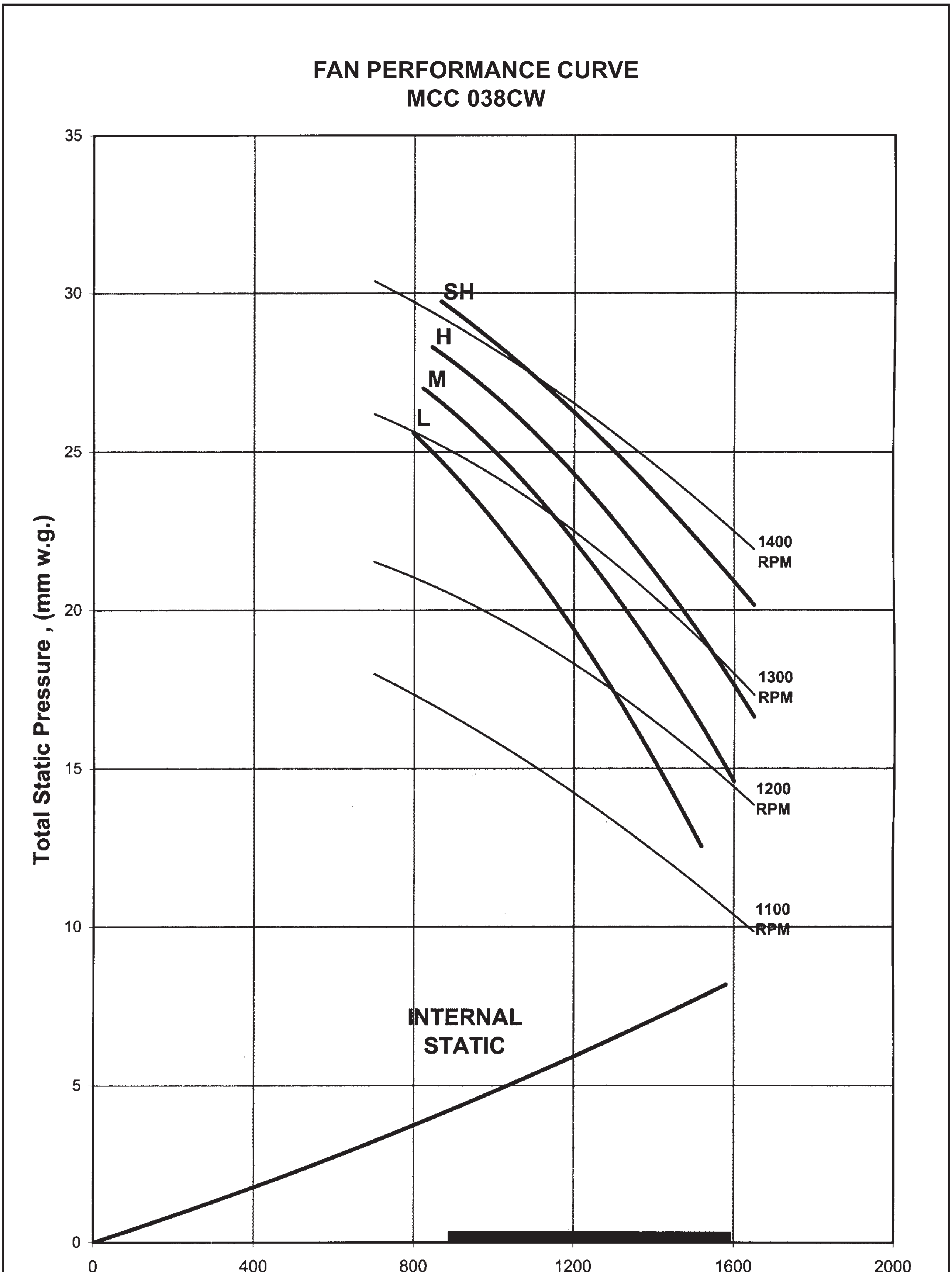

FAN PERFORMANCE CURVE
MCC 020CW
Total Static Pressure , (mm.w.g.)
Flowrate , (CFM)
16
14
12
10
8
6
4
2
0
0
200
400
600
800
1000
1200
H
M
L
1400 RPM
1300 RPM
1200 RPM
1100 RPM
1000 RPM
900 RPM
800 RPM
700 RPM
600 RPM
INTERNAL STATIC

FAN PERFORMANCE CURVE
MCC 025CW

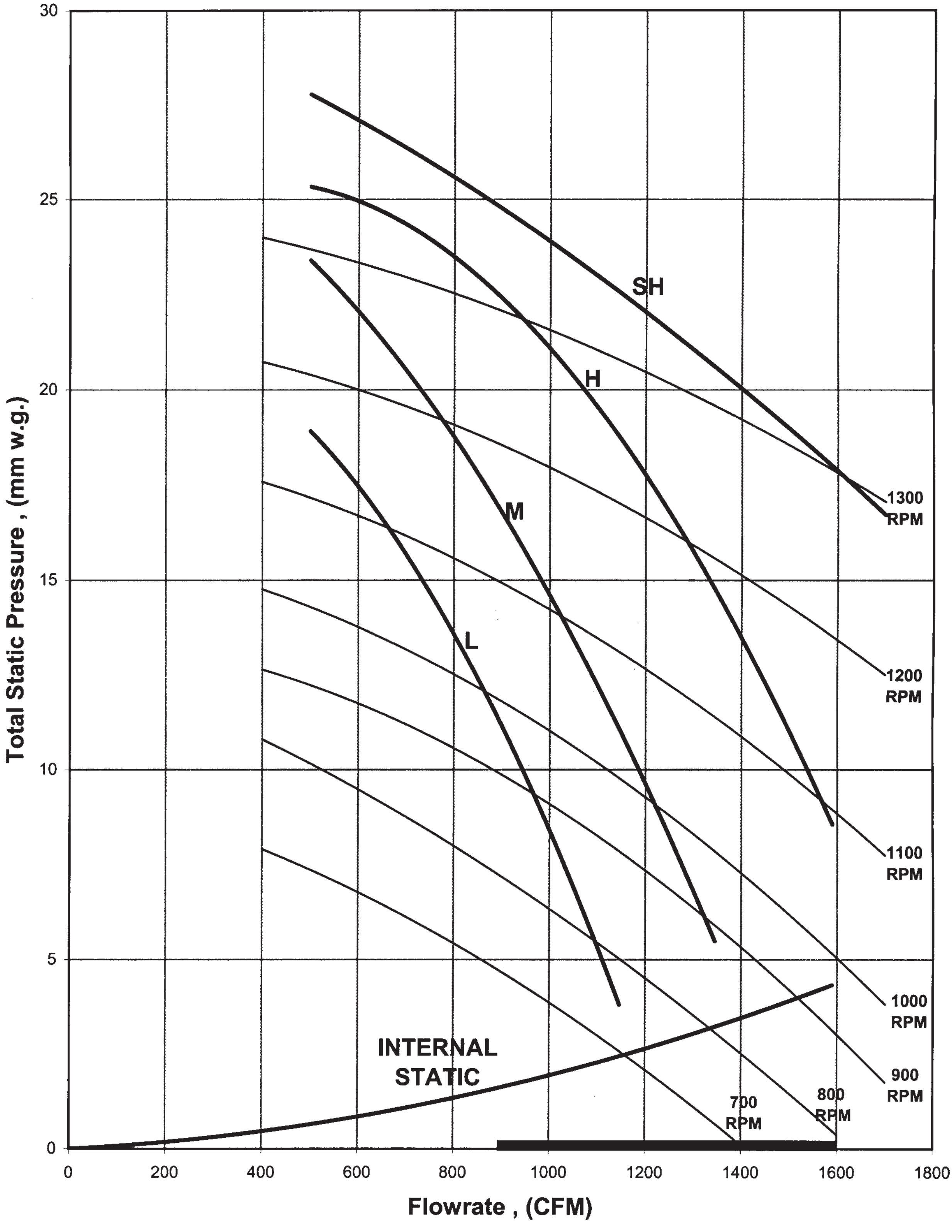


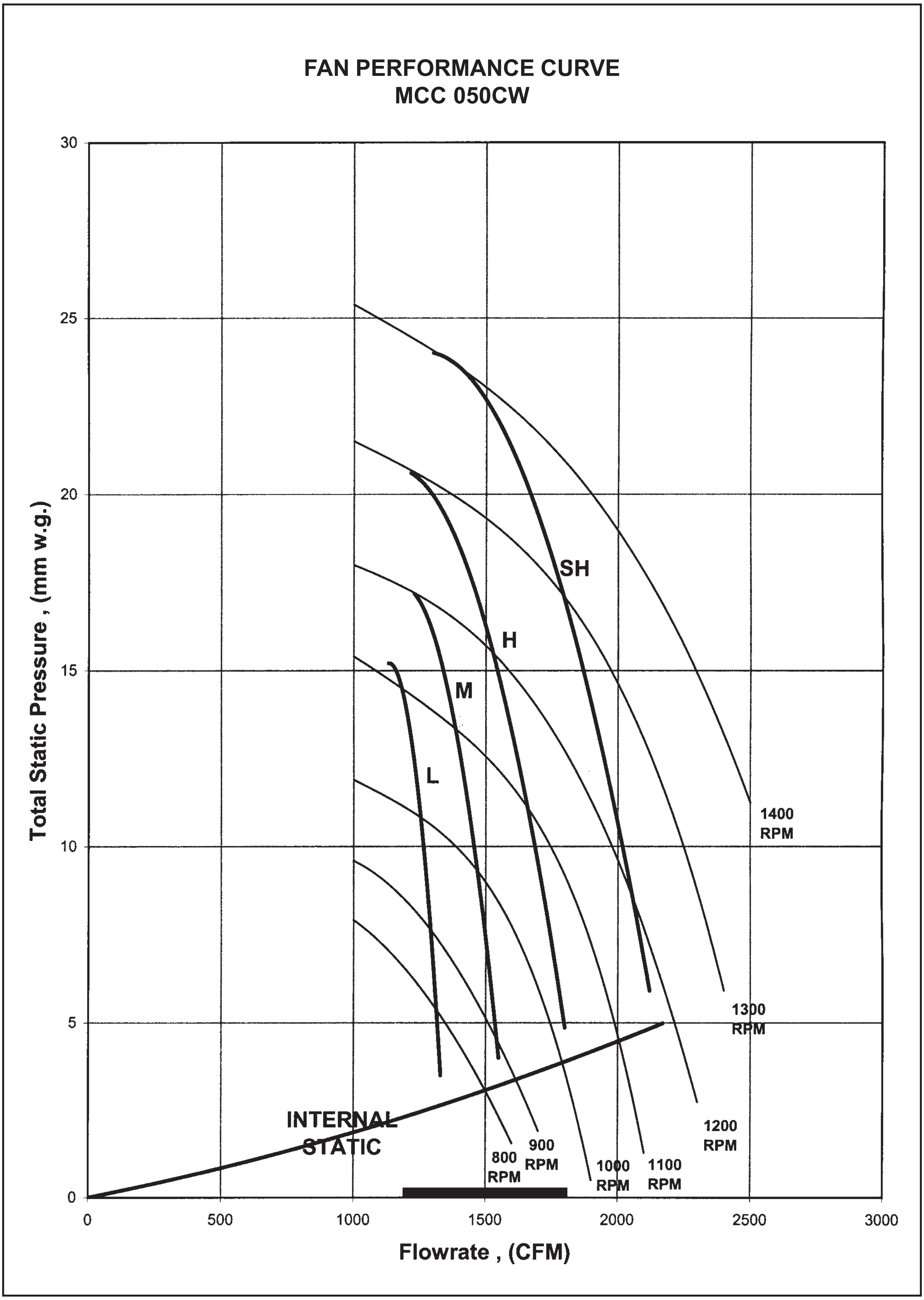

FAN PERFORMANCE CURVE
MCC 028CW
Total Static Pressure , (mm w.g.)
Flowrate , (CFM)
0
2
4
6
8
10
12
14
16
18
20
22
0
200
400
600
800
1000
1200
SH
H
M
L
1400 RPM
1300 RPM
1200 RPM
1100 RPM
1000 RPM
900 RPM
800 RPM
INTERNAL STATIC


FAN PERFORMANCE CURVE
MCC 030CW
Total Static Pressure , (mm w.g.)
Flowrate , (CFM)
30
25
20
15
10
5
0
0
200
400
600
800
1000
1200
1400
SH
H
M
L
INTERNAL
STATIC
1400 RPM
1300 RPM
1200 RPM
1100 RPM
1000 RPM
900 RPM
800 RPM
700 RPM

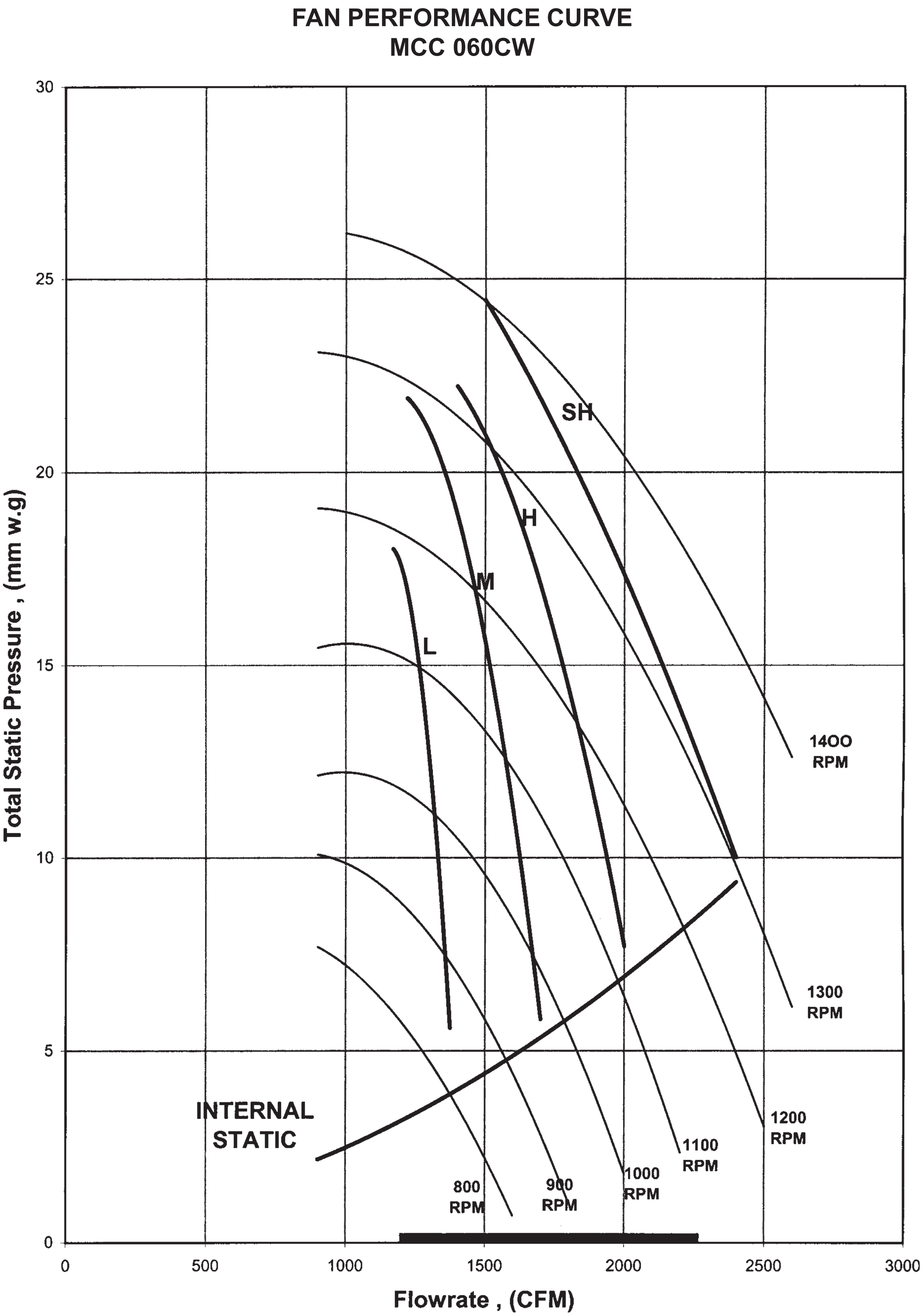

FAN PERFORMANCE CURVE
MCC 038CW
Total Static Pressure , (mm w.g.)
35
30
25
20
15
10
5
0
0
400
800
1200
1600
2000
Flowrate , (CFM)
SH
H
M
L
1400 RPM
1300 RPM
1200 RPM
1100 RPM
INTERNAL STATIC

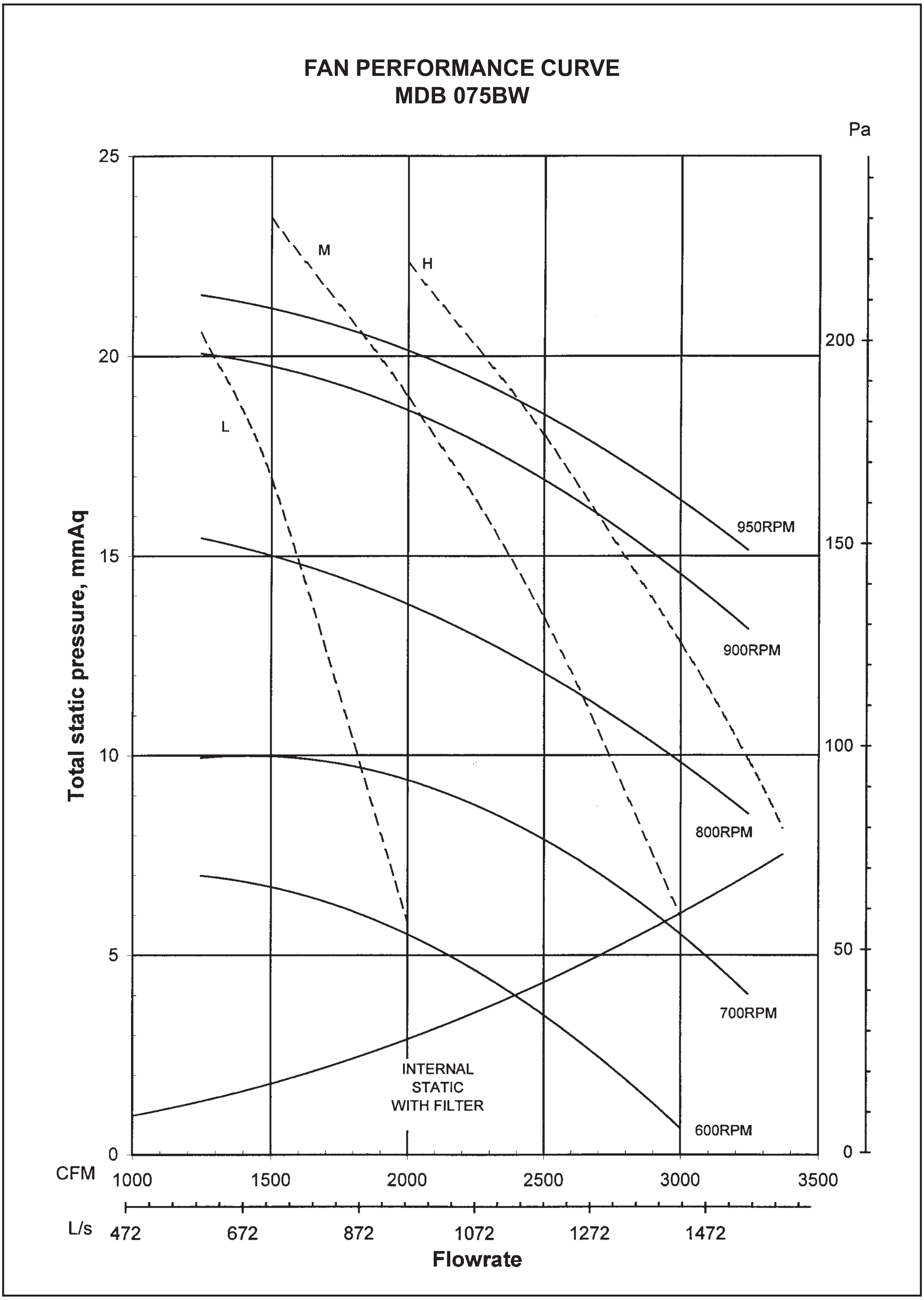
FAN PERFORMANCE CURVE
MCC 040CW



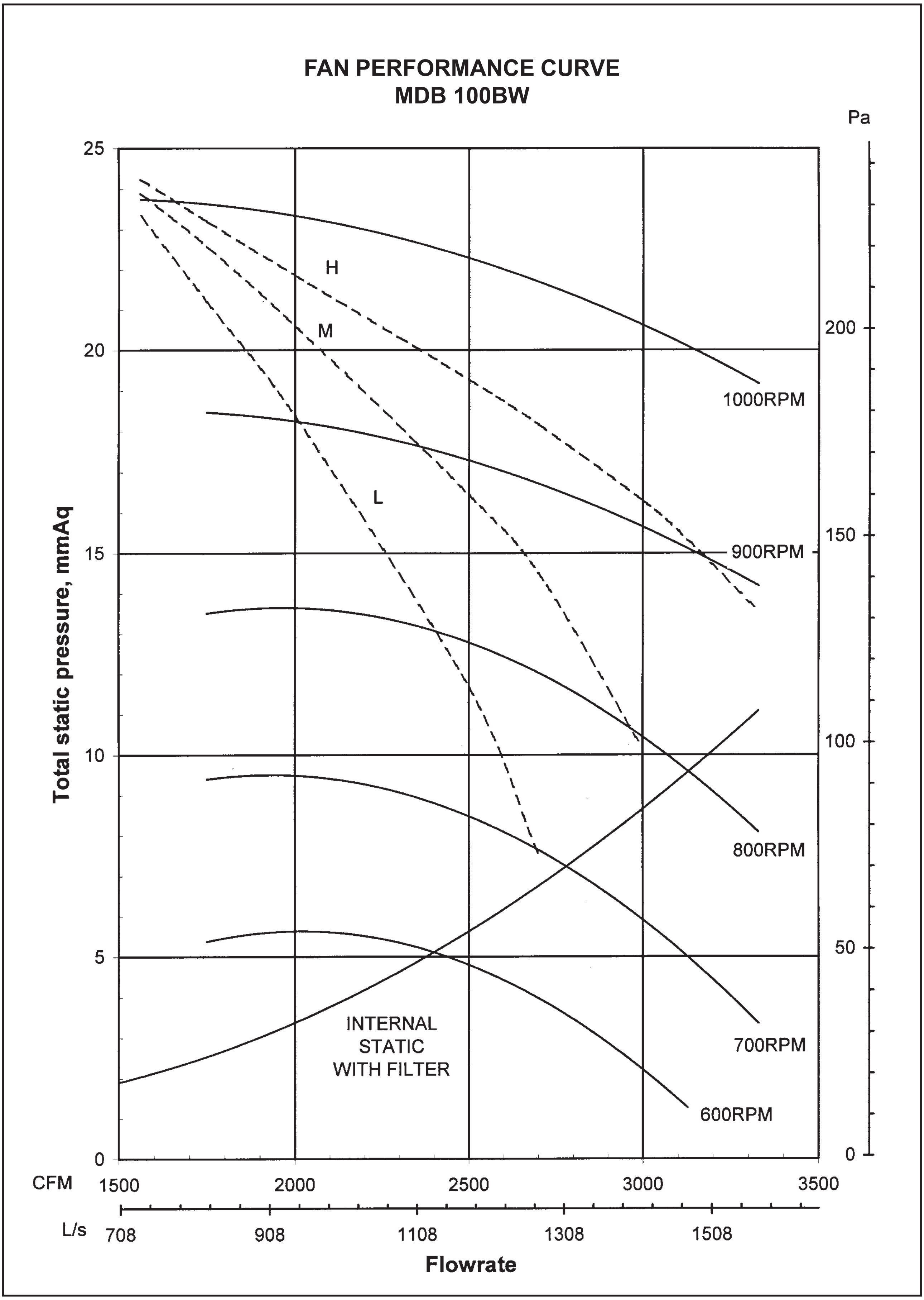


FAN PERFORMANCE CURVE
MCC 050CW
Total Static Pressure , (mm w.g.)
Flowrate , (CFM)
0
5
10
15
20
25
30
0
500
1000
1500
2000
2500
3000
SH
H
M
L
1400 RPM
1300 RPM
1200 RPM
1100 RPM
1000 RPM
900 RPM
800 RPM
INTERNAL STATIC

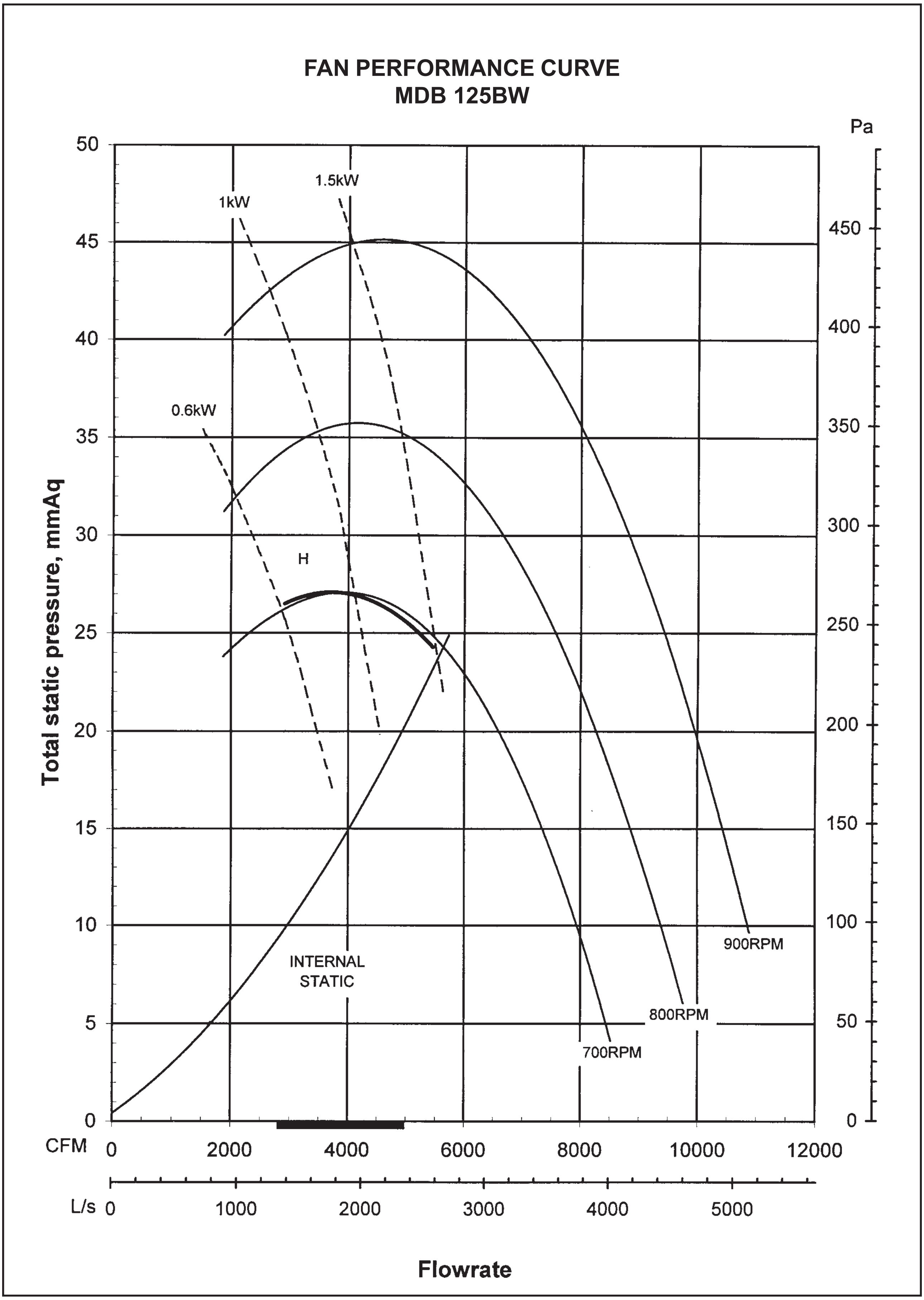

FAN PERFORMANCE CURVE
MCC 060CW
Total Static Pressure , (mm w.g)
Flowrate , (CFM)
30
25
20
15
10
5
0
0
500
1000
1500
2000
2500
3000
SH
H
M
L
14OO RPM
1300 RPM
1200 RPM
1100 RPM
1000 RPM
900 RPM
800 RPM
INTERNAL STATIC



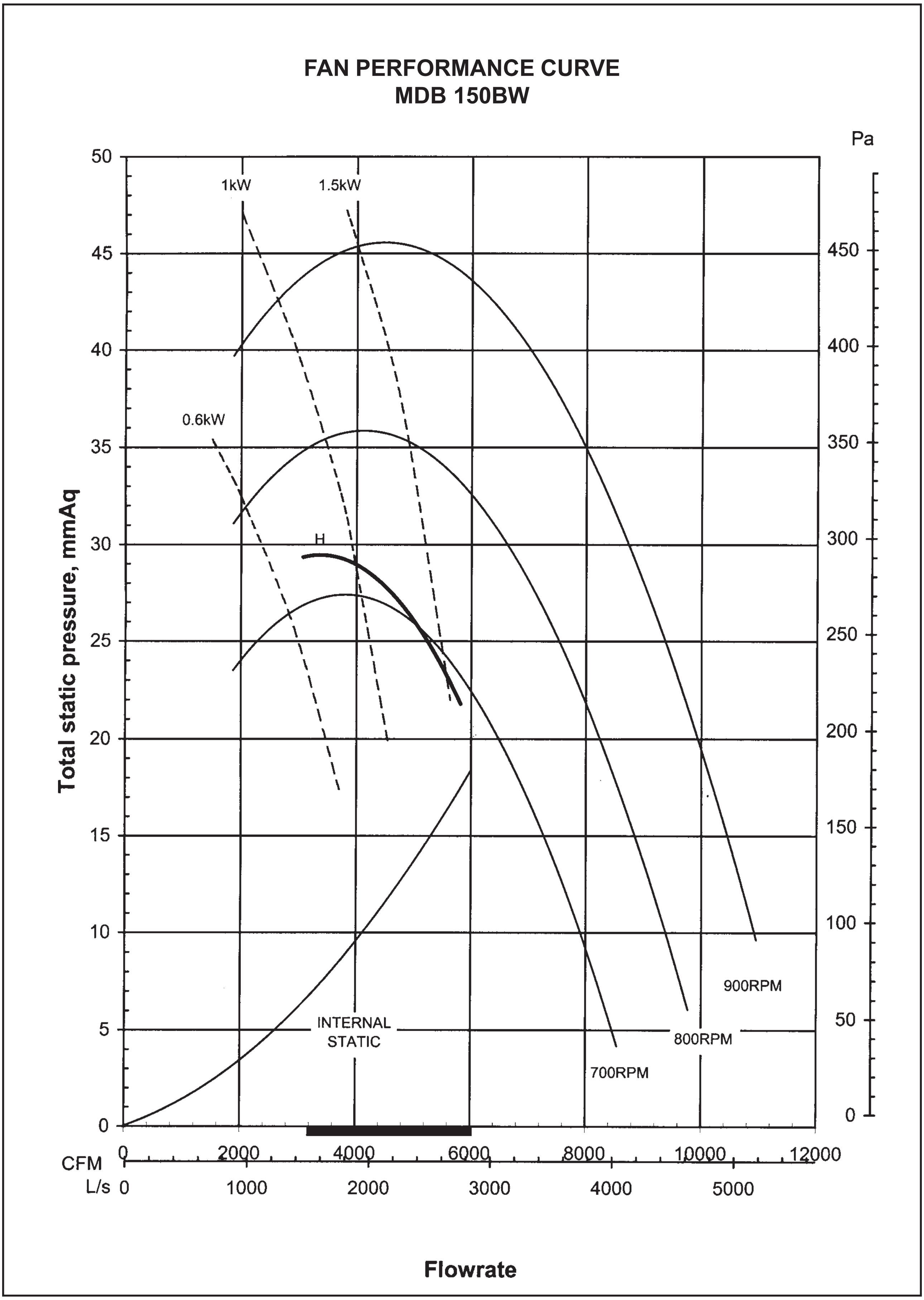
FAN PERFORMANCE CURVE
MDB 075BW
Pa
Total static pressure, mmAq
25
20
15
10
5
0
200
150
100
50
0
M
H
L
950RPM
900RPM
800RPM
700RPM
600RPM
INTERNAL
STATIC
WITH FILTER
CFM
1000
1500
2000
2500
3000
3500
L/s
472
672
872
1072
1272
1472
Flowrate



FAN PERFORMANCE CURVE
MDB 100BW
Pa
Total static pressure, mmAq
25
20
15
10
5
0
200
150
100
50
0
H
M
L
1000RPM
900RPM
800RPM
700RPM
600RPM
INTERNAL
STATIC
WITH FILTER
CFM
1500
2000
2500
3000
3500
L/s
708
908
1108
1308
1508
Flowrate



FAN PERFORMANCE CURVE
MDB 125BW
Pa
Total static pressure, mmAq
50
45
40
35
30
25
20
15
10
5
0
450
400
350
300
250
200
150
100
50
0
1kW
1.5kW
0.6kW
H
INTERNAL
STATIC
900RPM
800RPM
700RPM
CFM
0
2000
4000
6000
8000
10000
12000
L/s
0
1000
2000
3000
4000
5000
Flowrate


FAN PERFORMANCE CURVE
MDB 150BW
Pa
Total static pressure, mmAq
1kW
1.5kW
0.6kW
H
INTERNAL
STATIC
700RPM
800RPM
900RPM
CFM
L/s
0
2000
4000
6000
8000
10000
12000
1000
3000
5000
5
10
15
20
25
30
35
40
45
50
100
150
200
250
300
350
400
450
Flowrate

Water Flow Vs Pressure Drop

Wall Mounted Split Type

MODELS	FLOW RATE		WATER PRESSURE DROP	
	LITRES/M	USGPM	kPa	PSI
MWM007GW	4.20	1.11	15.99	2.32
	5.60	1.48	26.43	3.84
	7.00	1.85	39.28	5.70
	8.40	2.22	54.38	7.89
	9.80	2.59	71.84	10.43
MWM010GW	4.79	1.27	18.97	2.75
	6.39	1.69	31.45	4.56
	7.99	2.11	46.87	6.80
	9.58	2.53	65.11	9.45
	11.18	2.95	85.91	12.47
MWM015GW	5.40	1.43	24.42	3.54
	7.21	1.90	40.48	5.88
	9.01	2.38	60.65	8.80
	10.81	2.86	84.15	12.21
	12.61	3.33	111.22	16.14
MWM020GW	7.99	2.11	13.19	1.91
	10.66	2.82	22.14	3.21
	13.32	3.52	33.07	4.80
	15.99	4.22	46.01	6.68
	18.65	4.93	61.35	8.90
MWM025GW	8.28	2.19	14.02	2.03
	11.04	2.92	23.50	3.41
	13.80	3.65	35.14	5.10
	16.56	4.38	48.90	7.10
	19.32	5.10	65.22	9.47
MWM301W	10.45	2.76	16.26	2.36
	13.93	3.68	27.28	3.96
	17.41	4.60	40.86	5.93
	20.89	5.52	57.39	8.33
	24.38	6.44	76.34	11.08

Note :

a. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * (EWT°C * 1.8 + 32)

b. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * EWT°F

Water Flow Vs Pressure Drop

Ceiling Exposed Split Type

MODELS	FLOW RATE		WATER PRESSURE DROP	
	LITRES/M	USGPM	kPa	PSI
MCM020DW	8.86	2.34	5.17	0.750
	11.81	3.12	8.68	1.260
	14.76	3.90	13.02	1.890
	17.71	4.68	18.12	2.630
	20.67	5.46	24.18	3.510
MCM025DW	9.54	2.52	5.93	0.860
	12.72	3.36	9.92	1.440
	15.90	4.20	14.88	2.160
	19.08	5.04	20.74	3.010
	22.26	5.88	27.70	4.020
MCM030DW	11.13	2.94	5.24	0.760
	14.84	3.92	8.75	1.270
	18.55	4.90	13.09	1.900
	22.26	5.88	18.26	2.650
	25.97	6.86	24.39	3.540
MCM040DW	19.53	5.16	3.65	0.530
	26.04	6.88	6.06	0.880
	32.55	8.60	9.09	1.320
	39.06	10.32	12.61	1.830
	45.57	12.04	16.74	2.430
MCM050DW	21.12	5.58	4.20	0.610
	28.16	7.44	7.03	1.020
	35.20	9.30	10.47	1.520
	42.24	11.16	14.54	2.110
	49.28	13.02	19.43	2.820
MCM007CBW	2.95	0.78	2.66	0.386
	3.94	1.04	4.40	0.639
	4.92	1.30	6.58	0.955
	5.90	1.56	9.13	1.325
	6.89	1.82	12.06	1.750
MCM010CBW	4.09	1.08	4.73	0.686
	5.45	1.44	7.93	1.151
	6.81	1.80	11.84	1.719
	8.18	2.16	16.49	2.393
	9.54	2.52	21.85	3.171
MCM015CBW	5.22	1.38	1.38	0.200
	6.96	1.84	2.27	0.330
	8.71	2.30	3.38	0.490
	10.45	2.76	4.70	0.682
	12.19	3.22	6.20	0.900

Note :
a. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * (EWT°C * 1.8 + 32)
b. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * EWT°F

Water Flow Vs Pressure Drop

Ceiling Cassette Split Type

MODELS	FLOW RATE		WATER PRESSURE DROP	
	LITRES/M	USGPM	kPa	PSI
MCK020AW	12.49	3.30	6.68	0.970
	16.65	4.40	11.16	1.620
	20.82	5.50	16.74	2.430
	24.98	6.60	23.56	3.420
	29.14	7.70	31.28	4.540
MCK025AW	13.17	3.48	7.34	1.066
	17.56	4.64	12.33	1.790
	21.95	5.80	18.47	2.680
	26.34	6.96	25.98	3.770
	30.73	8.12	34.52	5.010
MCK030AW	15.22	4.02	9.51	1.380
	20.29	5.36	16.05	2.330
	25.36	6.70	24.25	3.520
	30.43	8.04	33.90	4.920
	35.50	9.38	45.20	6.560
MCK040AW	16.58	4.38	11.16	1.620
	22.10	5.84	18.74	2.720
	27.63	7.30	28.39	4.120
	33.16	8.76	39.76	5.770
	38.68	10.22	53.05	7.700
MCK050AW	17.03	4.50	11.71	1.700
	22.71	6.00	19.71	2.860
	28.39	7.50	29.83	4.330
	34.07	9.00	41.82	6.070
	39.74	10.50	55.81	8.100

Note :
a. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * (EWT°C * 1.8 + 32)
b. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * EWT°F

Water Flow Vs Pressure Drop

Ceiling Cassette Split Type

MODELS	FLOW RATE		WATER PRESSURE DROP	
	LITRES/M	USGPM	kPa	PSI
MCK010CW	4.31	1.14	17.69	2.567
	5.75	1.52	29.70	4.311
	7.19	1.90	44.37	6.440
	8.63	2.28	61.80	8.970
	10.07	2.66	82.47	11.969
MCK015CW	7.61	2.01	9.68	1.404
	10.14	2.68	16.05	2.330
	12.68	3.35	24.00	3.483
	15.22	4.02	33.29	4.831
	17.75	4.69	43.99	6.384
MCK020CW	8.18	2.16	10.99	1.595
	10.90	2.88	18.23	2.646
	13.63	3.60	27.30	3.962
	16.35	4.32	37.93	5.506
	19.08	5.04	50.14	7.277
MCK020AWH	9.08	2.40	1.92	0.278
	12.11	3.20	3.20	0.465
	15.14	4.00	4.78	0.694
	18.17	4.80	6.64	0.964
	21.20	5.60	8.80	1.277
MCK025AWH	9.77	2.58	2.18	0.316
	13.02	3.44	3.64	0.529
	16.28	4.30	5.44	0.790
	19.53	5.16	7.58	1.100
	22.79	6.02	10.04	1.457
MCK030AWH	11.36	3.00	2.85	0.413
	15.14	4.00	4.79	0.695
	18.93	5.00	7.17	1.040
	22.71	6.00	9.98	1.449
	26.50	7.00	13.34	1.936
MCK040AWH	12.49	3.30	3.40	0.493
	16.65	4.40	5.68	0.825
	20.82	5.50	8.52	1.237
	24.98	6.60	11.97	1.738
	29.14	7.70	15.92	2.310
MCK050AWH	12.72	3.36	3.51	0.509
	16.96	4.48	5.88	0.853
	21.20	5.60	8.81	1.279
	25.44	6.72	12.38	1.797
	29.67	7.84	16.45	2.388

Note :

a. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * (EWT°C * 1.8 + 32)

b. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * EWT°F

Water Flow Vs Pressure Drop

Ceiling Concealed Split Type

MODELS	FLOW RATE		WATER PRESSURE DROP	
	LITRES/M	USGPM	kPa	PSI
MCC010CW	4.54	1.20	2.69	0.390
	6.06	1.60	4.48	0.650
	7.57	2.00	6.68	0.970
	9.08	2.40	9.30	1.350
	10.60	2.80	12.26	1.780
MCC015CW	5.86	1.55	4.27	0.620
	7.81	2.06	7.17	1.040
	9.77	2.58	10.75	1.560
	11.72	3.10	14.95	2.170
	13.67	3.61	19.77	2.870
MCC020CW	9.54	2.52	5.65	0.820
	12.72	3.36	9.51	1.380
	15.90	4.20	14.19	2.060
	19.08	5.04	19.77	2.870
	22.26	5.88	26.46	3.840
MCC025CW	10.67	2.82	7.51	1.090
	14.23	3.76	12.61	1.830
	17.79	4.70	18.95	2.750
	21.35	5.64	26.60	3.860
	24.91	6.58	35.41	5.140
MCC028CW	12.94	3.42	4.55	0.660
	17.26	4.56	7.58	1.100
	21.57	5.70	11.37	1.650
	25.89	6.84	15.78	2.290
	30.20	7.98	21.08	3.060
MCC030CW	14.08	3.72	3.93	0.570
	18.77	4.96	6.61	0.960
	23.47	6.20	9.85	1.430
	28.16	7.44	13.71	1.990
	32.85	8.68	18.19	2.640
MCC038CW	21.80	5.76	13.99	2.030
	29.07	7.68	23.56	3.420
	36.34	9.60	35.76	5.190
	43.60	11.52	51.33	7.450
	50.87	13.44	54.57	7.920
MCC040CW	16.81	4.44	3.65	0.530
	22.41	5.92	9.85	1.430
	28.01	7.40	14.68	2.130
	33.61	8.88	20.53	2.980
	39.21	10.36	27.42	3.980
MCC050CW	22.71	6.00	11.64	1.690
	30.28	8.00	19.57	2.840
	37.85	10.00	29.63	4.300
	45.42	12.00	41.55	6.030
	52.99	14.00	55.40	8.040
MCC060CW	24.53	6.48	2.14	0.310
	32.70	8.64	3.51	0.510
	40.88	10.80	5.37	0.780
	49.05	12.96	7.44	1.080
	57.23	15.12	9.85	1.430

Note :

a. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * (EWT°C * 1.8 + 32)

b. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * EWT°F

Water Flow Vs Pressure Drop

Ducted Split Type

MODELS	FLOW RATE		WATER PRESSURE DROP	
	LITRES/M	USGPM	kPa	PSI
MDB075BW	37.02	9.78	6.29	0.913
	49.36	13.04	10.54	1.530
	61.70	16.30	15.85	2.300
	74.03	19.56	22.32	3.240
	86.37	22.82	29.70	4.310
MDB100BW	45.42	12.00	5.06	0.735
	60.56	16.00	8.47	1.230
	75.70	20.00	12.68	1.840
	90.84	24.00	17.85	2.590
	105.98	28.00	23.70	3.440
MDB125BW	61.54	16.26	7.10	1.030
	82.06	21.68	11.92	1.730
	102.57	27.10	17.91	2.600
	123.09	32.52	25.22	3.660
	143.60	37.94	33.55	4.870
MDB150BW	79.49	21.00	5.93	0.860
	105.98	28.00	9.65	1.400
	132.48	35.00	14.88	2.160
	158.97	42.00	20.88	3.030
	185.47	49.00	27.84	4.040

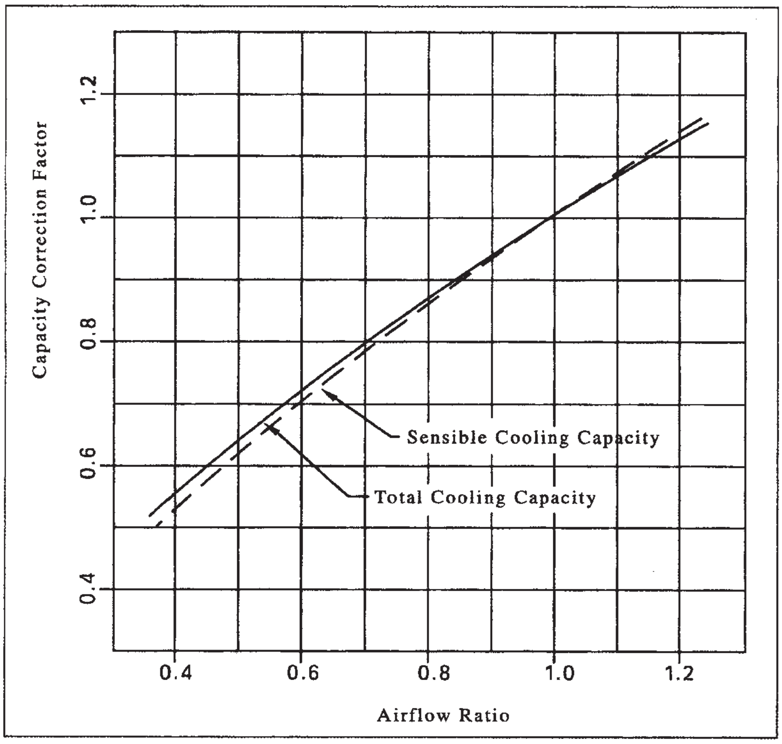
Note :

a. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * (EWT°C * 1.8 + 32)

b. PRESSURE DROP CORRECTION FACTOR = 1.2947 - 0.0021 * EWT°F

Correction Factors

AIRFLOW CAPACITY
CORRECTION FACTORS



Water temperature rise is held as constant.

Altitude Correction Factors

Elevation, m	Total Capacity	Sensible Capacity
0	1.00	1.00
300	0.99	0.96
600	0.98	0.93
900	0.97	0.90
1200	0.96	0.86
1500	0.94	0.83
1800	0.93	0.80

Heating Capacity Correction Factors

EAT	ENTERING TEMPERATURE, °C										
°C	37.8	43.3	45	48.8	54.4	60	65.5	71.1	76.7	82.2	87.7
4.4	0.838	0.980	1.021	1.122	1.265	1.406	1.552	1.698	1.845	1.988	2.134
7.2	0.771	0.913	0.954	1.055	1.198	1.379	1.485	1.631	1.778	1.920	2.067
10.0	0.700	0.843	0.885	0.986	1.130	1.272	1.417	1.563	1.710	1.853	2.000
12.7	0.631	0.773	0.817	0.918	1.062	1.205	1.349	1.495	1.639	1.786	1.931
15.5	0.562	0.705	0.748	0.848	0.992	1.137	1.281	1.427	1.572	1.719	1.865
18.3	0.493	0.636	0.679	0.779	0.923	1.070	1.212	1.358	1.504	1.650	1.799
21.1	0.424	0.567	0.610	0.711	0.855	1.000	1.146	1.290	1.438	1.583	1.730
23.9	0.354	0.498	0.541	0.642	0.786	0.932	1.078	1.222	1.369	1.515	1.664
26.7	0.284	0.428	0.471	0.573	0.717	0.863	1.008	1.155	1.302	1.449	1.597

Notes : Adjusted capacity, W (@ Nominal air flow) = base heating capacity (@ nominal 60°C EWT, 21.1°C EAT) x Heating Capacity Correction Factor

Engineering and Physical Data

General Data - MWM-GW

MODEL			MWM007GW	MWM010GW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	8000	9500
		W	2340	2780
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	5900	6900
		W	1730	2030
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	10300	12800
		W	3020	3750
NOMINAL AIR FLOW	HIGH	l/s / CFM	130 / 275	142 / 300
	MEDIUM	l/s / CFM	106 / 225	118 / 250
	LOW	l/s / CFM	83 / 175	94 / 200
UNIT DIMENSION	HEIGHT	mm/in	260 / 10.2	260 / 10.2
	WIDTH	mm/in	799 / 31.5	899 / 35.4
	DEPTH	mm/in	198 / 7.8	198 / 7.8
PACKING DIMENSION	HEIGHT	mm/in	337 / 13.3	337 / 13.3
	WIDTH	mm/in	857 / 33.7	957 / 37.7
	DEPTH	mm/in	270 / 10.6	270 / 10.6
UNIT WEIGHT		kg/lb	10 / 22.1	12 / 26.5
SOUND PRESSURE LEVEL (H/M/L)		dBA	38 / 33 / 28	39 / 34 / 28
NOMINAL WATER FLOW RATE		USGPM	1.76	2.11
		LITRES/M	6.66	7.99
HEAD LOSS (COOLING)		kPa / psi	48 / 7	65 / 9.4
HEAD LOSS (HEATING) : 50°C		kPa / psi	42 / 6.1	59 / 8.5
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.65	0.61
		ft/min	127.8	121.0
CONNECTION			1/2" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	16 / 0.63	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MWM-GW

MODEL			MWM015GW	MWM020GW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	11000	15500
		W	3220	4540
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	8000	12500
		W	2350	3650
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	14000	20500
		W	4100	6010
NOMINAL AIR FLOW	HIGH	l/s / CFM	163 / 345	297 / 630
	MEDIUM	l/s / CFM	134 / 285	231 / 490
	LOW	l/s / CFM	104 / 220	208 / 440
UNIT DIMENSION	HEIGHT	mm/in	260 / 10.2	304 / 12.0
	WIDTH	mm/in	899 / 35.4	1062 / 41.8
	DEPTH	mm/in	198 / 7.8	222 / 8.7
PACKING DIMENSION	HEIGHT	mm/in	337 / 13.3	378 / 14.9
	WIDTH	mm/in	857 / 33.7	1130 / 44.5
	DEPTH	mm/in	270 / 10.6	292 / 11.5
UNIT WEIGHT		kg/lb	12 / 26.5	16 / 35.3
SOUND PRESSURE LEVEL (H/M/L)		dBA	42 / 36 / 29	49 / 44 / 42
NOMINAL WATER FLOW RATE		USGPM	2.42	3.43
		LITRES/M	9.16	12.98
HEAD LOSS (COOLING)		kPa / psi	77 / 11.1	50 / 7.3
HEAD LOSS (HEATING) : 50°C		kPa / psi	64 / 9.2	51 / 7.3
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.71	0.90
		ft/min	139.1	177.4
CONNECTION			1/2" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	16 / 0.63	20 / 0.79

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MWM301W

MODEL			MWM025GW	MWM301GW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	18000	22000
		W	5280	6450
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	14800	16700
		W	4330	4330
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	23000	23000
		W	6740	6740
NOMINAL AIR FLOW	HIGH	l/s / CFM	311 / 660	316 / 670
	MEDIUM	l/s / CFM	274 / 580	297 / 630
	LOW	l/s / CFM	222 / 470	236 / 500
UNIT DIMENSION	HEIGHT	mm/in	304 / 12.0	291 / 11.4
	WIDTH	mm/in	1062 / 41.8	815 / 32.1
	DEPTH	mm/in	222 / 8.7	181 / 7.1
PACKING DIMENSION	HEIGHT	mm/in	378 / 14.9	430 / 16.9
	WIDTH	mm/in	1130 / 44.5	1267 / 49.9
	DEPTH	mm/in	292 / 11.5	271 / 10.7
UNIT WEIGHT		kg/lb	16 / 35.3	20 / 44.2
SOUND PRESSURE LEVEL (H/M/L)		dBA	50 / 48 / 45	49 / 47 / 45
NOMINAL WATER FLOW RATE		USGPM	4.00	4.90
		LITRES/M	15.14	18.55
HEAD LOSS (COOLING)		kPa / psi	69 / 10	52 / 7.6
HEAD LOSS (HEATING) : 50°C		kPa / psi	71 / 10.2	19 / 2.7
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.94	1.09
		ft/min	185.9	214.7
CONNECTION			1/2" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	20 / 0.79	

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MCK-AW

MODEL			MCK020AW	MCK025AW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	22500	25500
		W	6620	7500
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	16700	18400
		W	4900	5400
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	28500	32000
		W	8400	9500
NOMINAL AIR FLOW	HIGH	l/s / CFM	364 / 771	383 / 812
	MEDIUM	l/s / CFM	314 / 665	328 / 695
	LOW	l/s / CFM	297 / 630	297 / 630
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)	
	WIDTH	mm/in	820 / 32.3 (930 / 36.6)	
	DEPTH	mm/in	821 / 32.3 (930 / 36.6)	
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 / 15.0 (130 / 5.1)	
	WIDTH	mm/in	920 / 36.2 (1020 / 40.2)	
	DEPTH	mm/in	920 / 36.2 (1000 / 39.4)	
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(31+4) / (68.3+8.8)	(32+4) / (70.5+8.8)
SOUND PRESSURE LEVEL (H/M/L)		dBA	42 / 39 / 37	45 / 42 / 40
NOMINAL WATER FLOW RATE		USGPM	5.02	5.68
		LITRES/M	19.00	21.50
HEAD LOSS (COOLING)		kPa / psi	25 / 3.6	31 / 4.5
HEAD LOSS (HEATING) : 50°C		kPa / psi	21 / 3.1	27 / 3.9
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.78	0.82
		ft/min	153.6	161.8
FAN COIL WATER VOLUME & MASS		kg	2.7	2.7
CONNECTION			3/4" BSP FEMALE UNION	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCK020/025AW : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. MCK030/040/050AW : 1.5m BELOW THE FACIA (JIS B 8615).

General Data - MCK-AW

MODEL			MCK030AW	MCK040AW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	30000	33500
		W	8800	9950
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	21800	24200
		W	6400	7100
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	37500	40500
		W	11000	12000
NOMINAL AIR FLOW	HIGH	l/s / CFM	433 / 918	483 / 1024
	MEDIUM	l/s / CFM	367 / 777	425 / 901
	LOW	l/s / CFM	336 / 712	372 / 789
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)	
	WIDTH	mm/in	820 / 32.3 (930 / 36.6)	
	DEPTH	mm/in	821 / 32.3 (930 / 36.6)	
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 / 15.0 (130 / 5.1)	
	WIDTH	mm/in	920 / 36.2 (1020 / 40.2)	
	DEPTH	mm/in	920 / 36.2 (1000 / 39.4)	
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(35+4) / (77.2+8.8)	(38+4) / (83.8+8.8)
SOUND PRESSURE LEVEL (H/M/L)		dBA	49 / 45 / 43	51 / 48 / 46
NOMINAL WATER FLOW RATE		USGPM	6.65	7.53
		LITRES/M	25.23	28.52
HEAD LOSS (COOLING)		kPa / psi	42 / 6	52 / 7.6
HEAD LOSS (HEATING) : 50°C		kPa / psi	35 / 5.1	45 / 6.6
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.93	1.04
		ft/min	182.9	204.0
FAN COIL WATER VOLUME & MASS		kg	2.7	2.7
CONNECTION			3/4" BSP FEMALE UNION	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCK020/025AW : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. MCK030/040/050AW : 1.5m BELOW THE FACIA (JIS B 8615).

General Data - MCK-AW

MODEL			MCK050AW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	36500
		W	10800
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	26300
		W	7700
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	44000
		W	12900
NOMINAL AIR FLOW	HIGH	l/s / CFM	511 / 1083
	MEDIUM	l/s / CFM	467 / 989
	LOW	l/s / CFM	428 / 906
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)
	WIDTH	mm/in	820 / 32.3 (930 / 36.6)
	DEPTH	mm/in	821 / 32.3 (930 / 36.6)
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 / 15.0 (130 / 5.1)
	WIDTH	mm/in	920 / 36.2 (1020 / 40.2)
	DEPTH	mm/in	920 / 36.2 (1000 / 39.4)
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(40+4) / (88.2+8.8)
SOUND PRESSURE LEVEL (H/M/L)		dBA	53 / 52 / 50
NOMINAL WATER FLOW RATE		USGPM	8.19
		LITRES/M	30.97
HEAD LOSS (COOLING)		kPa / psi	69 / 10
HEAD LOSS (HEATING) : 50°C		kPa / psi	64 / 9.3
MAX. WORKING PRESSURE		kPa / psi	1608 / 233
SURFACE AIR VELOCITY		m/s	1.10
		ft/min	215.7
FAN COIL WATER VOLUME & MASS		kg	2.7
CONNECTION			3/4" BSP FEMALE UNION
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCK020/025AW : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. MCK030/040/050AW : 1.5m BELOW THE FACIA (JIS B 8615).

General Data - MCK-AWH

MODEL			MCK020AWH	MCK025AWH
NOMINAL TOTAL COOLING CAPACITY		Btu/h	13000	13500
		W	3810	3960
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	11600	12000
		W	3400	3520
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 70°C)		Btu/h	36000	37500
		W	10550	10990
NOMINAL AIR FLOW	HIGH	l/s / CFM	364 / 771	383 / 812
	MEDIUM	l/s / CFM	314 / 665	328 / 695
	LOW	l/s / CFM	297 / 630	297 / 630
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)	
	WIDTH	mm/in	820 / 32.3 (930 / 36.6)	
	DEPTH	mm/in	821 / 32.3 (930 / 36.6)	
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 / 15.0 (130 / 5.1)	
	WIDTH	mm/in	920 / 36.2 (1020 / 40.2)	
	DEPTH	mm/in	920 / 36.2 (1000 / 39.4)	
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(31+4) / (68.3+8.8)	(32+4) / (70.5+8.8)
SOUND PRESSURE LEVEL (H/M/L)		dBA	42 / 39 / 37	45 / 42 / 40
NOMINAL WATER FLOW RATE (COOLING)		USGPM	2.90	3.00
		LITRES/M	10.92	11.35
NOMINAL WATER FLOW RATE (HEATING) : 70°C		USGPM	4.00	4.18
		LITRES/M	15.12	15.75
HEAD LOSS (COOLING)		kPa / psi	4 / 0.5	4 / 0.5
HEAD LOSS (HEATING) : 70°C		kPa / psi	5 / 0.7	6 / 0.8
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.78	0.82
		ft/min	153.6	161.8
FAN COIL WATER VOLUME & MASS		kg	1.3	1.3
CONNECTION			3/4" BSP FEMALE UNION	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCK020/025AWH : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. MCK030/040/050AWH : 1.5m BELOW THE FACIA (JIS B 8615).

General Data - MCK-AWH

MODEL			MCK030AWH	MCK040AWH
NOMINAL TOTAL COOLING CAPACITY		Btu/h	15500	17000
		W	4630	5010
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	13900	15000
		W	4070	4400
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 70°C)		Btu/h	42500	45500
		W	12510	13480
NOMINAL AIR FLOW	HIGH	l/s / CFM	433 / 918	483 / 1024
	MEDIUM	l/s / CFM	367 / 777	425 / 901
	LOW	l/s / CFM	336 / 712	372 / 789
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)	
	WIDTH	mm/in	820 / 32.3 (930 / 36.6)	
	DEPTH	mm/in	821 / 32.3 (930 / 36.6)	
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 / 15.0 (130 / 5.1)	
	WIDTH	mm/in	920 / 36.2 (1020 / 40.2)	
	DEPTH	mm/in	920 / 36.2 (1000 / 39.4)	
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(35+4) / (77.2+8.8)	(38+4) / (83.8+8.8)
SOUND PRESSURE LEVEL (H/M/L)		dBA	49 / 45 / 43	51 / 48 / 46
NOMINAL WATER FLOW RATE (COOLING)		USGPM	3.52	3.80
		LITRES/M	13.27	14.37
NOMINAL WATER FLOW RATE (HEATING) : 70°C		USGPM	4.76	5.10
		LITRES/M	17.93	19.32
HEAD LOSS (COOLING)		kPa / psi	5 / 0.7	6 / 0.8
HEAD LOSS (HEATING) : 70°C		kPa / psi	7 / 1.0	9 / 1.2
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.93	1.04
		ft/min	182.9	204.0
FAN COIL WATER VOLUME & MASS		kg	1.3	1.3
CONNECTION			3/4" BSP FEMALE UNION	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCK020/025AWH : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. MCK030/040/050AWH : 1.5m BELOW THE FACIA (JIS B 8615).

General Data - MCK-AWH

MODEL			MCK050AWH
NOMINAL TOTAL COOLING CAPACITY		Btu/h	17500
		W	5160
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	15500
		W	4540
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 70°C)		Btu/h	46500
		W	13770
NOMINAL AIR FLOW	HIGH	l/s / CFM	511 / 1083
	MEDIUM	l/s / CFM	467 / 989
	LOW	l/s / CFM	428 / 906
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	335 / 13.2 (363 / 14.3)
	WIDTH	mm/in	820 / 32.3 (930 / 36.6)
	DEPTH	mm/in	821 / 32.3 (930 / 36.6)
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	380 / 15.0 (130 / 5.1)
	WIDTH	mm/in	920 / 36.2 (1020 / 40.2)
	DEPTH	mm/in	920 / 36.2 (1000 / 39.4)
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(40+4) / (88.2+8.8)
SOUND PRESSURE LEVEL (H/M/L)		dBA	53 / 52 / 50
NOMINAL WATER FLOW RATE (COOLING)		USGPM	3.92
		LITRES/M	14.80
NOMINAL WATER FLOW RATE (HEATING) : 70°C		USGPM	5.20
		LITRES/M	19.73
HEAD LOSS (COOLING)		kPa / psi	6 / 0.9
HEAD LOSS (HEATING) : 70°C		kPa / psi	9 / 1.3
MAX. WORKING PRESSURE		kPa / psi	1608 / 233
SURFACE AIR VELOCITY		m/s	1.10
		ft/min	215.7
FAN COIL WATER VOLUME & MASS		kg	1.3
CONNECTION			3/4" BSP FEMALE UNION
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCK020/025AWH : POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA. MCK030/040/050AWH : 1.5m BELOW THE FACIA (JIS B 8615).

General Data - MCK-CW

MODEL			MCK010CW	MCK015CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	8000	14000
		W	2340	4100
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	6700	10400
		W	1970	3060
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	11000	17500
		W	3220	5120
NOMINAL AIR FLOW	HIGH	l/s / CFM	184 / 390	184 / 390
	MEDIUM	l/s / CFM	175 / 371	175 / 371
	LOW	l/s / CFM	165 / 350	165 / 350
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	250 / 9.8 (295 / 11.6)	
	WIDTH	mm/in	570 / 22.4 (640 / 25.2)	
	DEPTH	mm/in	570 / 22.4 (640 / 25.2)	
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	317 / 12.5 (127 / 5.0)	
	WIDTH	mm/in	630 / 24.8 (700 / 27.6)	
	DEPTH	mm/in	630 / 24.8 (700 / 27.6)	
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(22+2) / (48.5+4.4)	(23+2) / (50.7+4.4)
SOUND PRESSURE LEVEL (H/M/L)		dBA	44 / 43 / 42	44 / 42 / 41
NOMINAL WATER FLOW RATE		USGPM	1.76	3.13
		LITRES/M	6.70	11.75
HEAD LOSS (COOLING)		kPa / psi	67 / 9.8	69 / 9.9
HEAD LOSS (HEATING) : 50°C		kPa / psi	62 / 9	71 / 10.2
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.77	0.60
		ft/min	151.0	118.1
FAN COIL WATER VOLUME & MASS		kg	0.6	1.2
CONNECTION			3/4" BSP FEMALE UNION	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA.

General Data - MCK-CW

MODEL			MCK020CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	14500
		W	4250
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	11100
		W	3240
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	18500
		W	5420
NOMINAL AIR FLOW	HIGH	l/s / CFM	203 / 430
	MEDIUM	l/s / CFM	193 / 409
	LOW	l/s / CFM	184 / 390
UNIT DIMENSION - ( ) WITH PANEL	HEIGHT	mm/in	250 / 9.8 (295 / 11.6)
	WIDTH	mm/in	570 / 22.4 (640 / 25.2)
	DEPTH	mm/in	570 / 22.4 (640 / 25.2)
PACKING DIMENSION ( ) - PANEL	HEIGHT	mm/in	317 / 12.5 (127 / 5.0)
	WIDTH	mm/in	630 / 24.8 (700 / 27.6)
	DEPTH	mm/in	630 / 24.8 (700 / 27.6)
UNIT WEIGHT (UNIT + PANEL)		kg/lb	(23+2) / (50.7+4.4)
SOUND PRESSURE LEVEL (H/M/L)		dBA	47 / 46 / 44
NOMINAL WATER FLOW RATE		USGPM	3.21
		LITRES/M	12.18
HEAD LOSS (COOLING)		kPa / psi	69 / 10
HEAD LOSS (HEATING) : 50°C		kPa / psi	71 / 10.3
MAX. WORKING PRESSURE		kPa / psi	1608 / 233
SURFACE AIR VELOCITY		m/s	0.66
		ft/min	130.2
FAN COIL WATER VOLUME & MASS		kg	1.2
CONNECTION			3/4" BSP FEMALE UNION
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE FACIA.

General Data - MCM-DW

MODEL			MCM020DW	MCM025DW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	17700	20800
		W	5190	6100
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	13700	15000
		W	4000	4400
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	22000	25900
		W	6450	7590
NOMINAL AIR FLOW	HIGH	l/s / CFM	264 / 560	297 / 630
	MEDIUM	l/s / CFM	238 / 505	293 / 620
	LOW	l/s / CFM	189 / 400	262 / 555
UNIT DIMENSION	HEIGHT	mm/in	214 / 8.4	
	WIDTH	mm/in	1214 / 47.8	
	DEPTH	mm/in	670 / 26.4	
PACKING DIMENSION	HEIGHT	mm/in	301 / 11.9	
	WIDTH	mm/in	1311 / 51.6	
	DEPTH	mm/in	760 / 29.9	
UNIT WEIGHT		kg/lb	43 / 94.8	
SOUND PRESSURE LEVEL (H/M/L)		dBA	50 / 47 / 40	54 / 53 / 50
NOMINAL WATER FLOW RATE		USGPM	3.92	4.62
		LITRES/M	14.84	17.49
HEAD LOSS (COOLING)		kPa / psi	46 / 6.6	56 / 8.1
HEAD LOSS (HEATING) : 50°C		kPa / psi	39 / 5.7	48 / 7
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.39	1.56
		ft/min	273.0	307.2
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"	

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCM020/025DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT. MCM030/040/050DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE VERTICAL CENTRE LINE OF THE UNIT (JIS B 8615)

General Data - MCM-DW

MODEL			MCM030DW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	24600
		W	7210
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	17700
		W	5190
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	28000
		W	8210
NOMINAL AIR FLOW	HIGH	l/s / CFM	329 / 697
	MEDIUM	l/s / CFM	324 / 687
	LOW	l/s / CFM	307 / 650
UNIT DIMENSION	HEIGHT	mm/in	249 / 9.8
	WIDTH	mm/in	1214 / 47.8
	DEPTH	mm/in	670 / 26.4
PACKING DIMENSION	HEIGHT	mm/in	354 / 13.9
	WIDTH	mm/in	1376 / 54.2
	DEPTH	mm/in	766 / 30.2
UNIT WEIGHT		kg/lb	45 / 99.2
SOUND PRESSURE LEVEL (H/M/L)		dBA	51 / 50 / 48
NOMINAL WATER FLOW RATE		USGPM	5.46
		LITRES/M	20.67
HEAD LOSS (COOLING)		kPa / psi	49 / 7.2
HEAD LOSS (HEATING) : 50°C		kPa / psi	43 / 6.2
MAX. WORKING PRESSURE		kPa / psi	1608 / 233
SURFACE AIR VELOCITY		m/s	1.37
		ft/min	270.3
CONNECTION			3/4" BSP FEMALE ADAPTOR
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCM020/025DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT. MCM030/040/050DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE VERTICAL CENTRE LINE OF THE UNIT (JIS B 8615)

General Data - MCM-DW

MODEL			MCM040DW	MCM050DW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	31200	45000
		W	9140	13190
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	25600	31400
		W	7500	9200
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	42300	51500
		W	12400	15090
NOMINAL AIR FLOW	HIGH	l/s / CFM	451 / 956	500 / 1059
	MEDIUM	l/s / CFM	428 / 908	483 / 1023
	LOW	l/s / CFM	419 / 889	451 / 956
UNIT DIMENSION	HEIGHT	mm/in	249 / 9.8	
	WIDTH	mm/in	1714 / 67.5	
	DEPTH	mm/in	670 / 26.4	
PACKING DIMENSION	HEIGHT	mm/in	354 / 13.9	
	WIDTH	mm/in	1876 / 73.9	
	DEPTH	mm/in	766 / 30.2	
UNIT WEIGHT		kg/lb	70 / 154.3	
SOUND PRESSURE LEVEL (H/M/L)		dBA	54 / 53 / 52	54 / 53 / 52
NOMINAL WATER FLOW RATE		USGPM	6.91	9.99
		LITRES/M	26.16	37.82
HEAD LOSS (COOLING)		kPa / psi	24 / 3.5	38 / 5.5
HEAD LOSS (HEATING) : 50°C		kPa / psi	22 / 3.1	32 / 4.6
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.22	1.35
		ft/min	240.2	266.2
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"	

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO JIS C 9612 STANDARD. MCM020/025DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT. MCM030/040/050DW : POSITION OF THE MEASUREMENT POINT IS 1m IN FRONT AND 1m BELOW THE VERTICAL CENTRE LINE OF THE UNIT (JIS B 8615)

General Data - MCM-CBW

MODEL			MCM007CBW	MCM010CBW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	6500	8500
		W	1910	2490
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	5000	6700
		W	1460	1960
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	8000	11000
		W	2340	3220
NOMINAL AIR FLOW	HIGH	l/s / CFM	94 / 200	142 / 300
	MEDIUM	l/s / CFM	82 / 173	134 / 284
	LOW	l/s / CFM	71 / 150	119 / 253
UNIT DIMENSION	HEIGHT	mm/in	235 / 9.3	
	WIDTH	mm/in	666 / 26.2	
	DEPTH	mm/in	824 / 32.4	
PACKING DIMENSION	HEIGHT	mm/in	301 / 11.9	
	WIDTH	mm/in	757 / 29.8	
	DEPTH	mm/in	936 / 36.9	
UNIT WEIGHT		kg/lb	33 / 72.8	
SOUND PRESSURE LEVEL (H/M/L)		dBA	45 / 42 / 37	46 / 43 / 38
NOMINAL WATER FLOW RATE		USGPM	1.45	1.89
		LITRES/M	5.49	7.15
HEAD LOSS (COOLING)		kPa / psi	9 / 1.4	15 / 2.2
HEAD LOSS (HEATING) : 50°C		kPa / psi	7 / 1	13 / 1.8
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.79	1.18
		ft/min	155.1	232.7
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"	

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE TESTED AT 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MCM-CBW

MODEL			MCM015CBW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	10500
		W	3080
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	8600
		W	2520
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	14500
		W	4250
NOMINAL AIR FLOW	HIGH	l/s / CFM	189 / 400
	MEDIUM	l/s / CFM	156 / 330
	LOW	l/s / CFM	139 / 294
UNIT DIMENSION	HEIGHT	mm/in	235 / 9.3
	WIDTH	mm/in	666 / 26.2
	DEPTH	mm/in	1174 / 46.2
PACKING DIMENSION	HEIGHT	mm/in	301 / 11.9
	WIDTH	mm/in	757 / 29.8
	DEPTH	mm/in	1286 / 50.6
UNIT WEIGHT		kg/lb	35 / 77.2
SOUND PRESSURE LEVEL (H/M/L)		dBA	47 / 44 / 39
NOMINAL WATER FLOW RATE		USGPM	2.33
		LITRES/M	8.82
HEAD LOSS (COOLING)		kPa / psi	5 / 0.7
HEAD LOSS (HEATING) : 50°C		kPa / psi	4 / 0.5
MAX. WORKING PRESSURE		kPa / psi	1608 / 233
SURFACE AIR VELOCITY		m/s	0.99
		ft/min	195.2
CONNECTION			3/4" BSP FEMALE ADAPTOR
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)
	OPERATION		LCD WIRELESS MICRO-COMPUTER REMOTE CONTROL
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"

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2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151 & ISO13253.
3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE TESTED AT 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MCM-EW

MODEL			MCM015EW	MCM020EW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	15500	20300
		W	4540	5950
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	12700	15400
		W	3720	4510
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	19500	25000
		W	5720	7330
NOMINAL AIR FLOW	HIGH	l/s / CFM	236 / 500	274 / 580
	MEDIUM	l/s / CFM	213 / 450	250 / 530
	LOW	l/s / CFM	189 / 400	231 / 490
UNIT DIMENSION	HEIGHT	mm/in	212 / 8.3	
	WIDTH	mm/in	1090 / 42.9	
	DEPTH	mm/in	630 / 24.8	
PACKING DIMENSION	HEIGHT	mm/in	297 / 11.7	
	WIDTH	mm/in	1197 / 47.1	
	DEPTH	mm/in	740 / 29.1	
UNIT WEIGHT		kg/lb	27 / 59.5	
SOUND PRESSURE LEVEL (H/M/L)		dBA	50 / 43 / 41	53 / 51 / 49
NOMINAL WATER FLOW RATE		USGPM	3.43	4.49
		LITRES/M	12.98	17.00
HEAD LOSS (COOLING)		kPa / psi	27 / 4	48 / 7
HEAD LOSS (HEATING) : 50°C		kPa / psi	24 / 3.5	42 / 6.1
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	0.72	0.83
		ft/min	140.9	163.3
CONNECTION			1/2" BSP FEMALE ADAPTOR	
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT	
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"	

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3) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE TESTED AT 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MCM-EW

MODEL			MCM025EW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	21000
		W	6150
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	16200
		W	4750
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	28000
		W	8210
NOMINAL AIR FLOW	HIGH	l/s / CFM	293 / 620
	MEDIUM	l/s / CFM	269 / 570
	LOW	l/s / CFM	245 / 520
UNIT DIMENSION	HEIGHT	mm/in	212 / 8.3
	WIDTH	mm/in	1090 / 42.9
	DEPTH	mm/in	630 / 24.8
PACKING DIMENSION	HEIGHT	mm/in	297 / 11.7
	WIDTH	mm/in	1197 / 47.1
	DEPTH	mm/in	740 / 29.1
UNIT WEIGHT		kg/lb	27 / 59.5
SOUND PRESSURE LEVEL (H/M/L)		dBA	56 / 51 / 44
NOMINAL WATER FLOW RATE		USGPM	4.67
		LITRES/M	17.68
HEAD LOSS (COOLING)		kPa / psi	57 / 8.3
HEAD LOSS (HEATING) : 50°C		kPa / psi	50 / 7.3
MAX. WORKING PRESSURE		kPa / psi	1608 / 233
SURFACE AIR VELOCITY		m/s	1.54
		ft/min	302.3
CONNECTION			1/2" BSP FEMALE ADAPTOR
CONTROL	ROOM TEMPERATURE		MICRO-COMPUTER CONTROLLED THERMOSTAT
	AIR DISCHARGE		AUTOMATIC LOUVER (UP& DOWN)
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4"

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b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE TESTED AT 1m IN FRONT AND 0.8m BELOW THE VERTICAL CENTRE LINE OF THE UNIT.

General Data - MCC-CW

MODEL			MCC010CW	MCC015CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	9900	11600
		W	2900	3400
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	7000	10600
		W	2050	3100
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	11500	15000
		W	3370	4400
NOMINAL AIR FLOW	HIGH	l/s / CFM	142 / 300	241 / 510
	MEDIUM	l/s / CFM	123 / 260	208 / 440
	LOW	l/s / CFM	104 / 220	170 / 360
EXTERNAL STATIC (H/M/L)		mmAq	5 / 4 / 3	5 / 4 / 2
UNIT DIMENSION	HEIGHT	mm/in	261 / 10.3	261 / 10.3
	WIDTH	mm/in	765 / 30.1	905 / 35.6
	DEPTH	mm/in	411 / 16.2	411 / 16.2
PACKING DIMENSION	HEIGHT	mm/in	376 / 14.8	376 / 14.8
	WIDTH	mm/in	951 / 37.4	1090 / 42.9
	DEPTH	mm/in	541 / 21.3	541 / 21.3
UNIT WEIGHT		kg/lb	17 / 37.5	21 / 46.3
SOUND PRESSURE LEVEL (H/M/L)		dBA	33 / 30 / 26	37 / 34 / 29
NOMINAL WATER FLOW RATE		USGPM	2.20	2.55
		LITRES/M	8.33	9.65
HEAD LOSS (COOLING)		kPa / psi	11 / 1.5	24 / 3.5
HEAD LOSS (HEATING) : 50°C		kPa / psi	9 / 1.3	20 / 2.9
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.29	1.73
		ft/min	254.4	339.8
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO GB STD - GB/D17758. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE CENTRE OF THE UNIT. TESTED WITH 2m LENGTH DUCT AT THE AIR DISCHARGE OUTLET ANS AIR RETURN INLET.

General Data - MCC-CW

MODEL			MCC020CW	MCC025CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	18000	22500
		W	5280	6590
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	12600	15800
		W	3690	4620
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	23000	29000
		W	6740	8500
NOMINAL AIR FLOW	HIGH	l/s / CFM	330 / 700	344 / 730
	MEDIUM	l/s / CFM	321 / 680	340 / 720
	LOW	l/s / CFM	293 / 620	274 / 580
EXTERNAL STATIC (H/M/L)		mmAq	7 / 6 / 3	6 / 4 / 3
UNIT DIMENSION	HEIGHT	mm/in	261 / 10.3	261 / 10.3
	WIDTH	mm/in	1065 / 41.9	1200 / 47.2
	DEPTH	mm/in	411 / 16.2	411 / 16.2
PACKING DIMENSION	HEIGHT	mm/in	376 / 14.8	376 / 14.8
	WIDTH	mm/in	1251 / 49.3	1386 / 54.6
	DEPTH	mm/in	541 / 21.3	541 / 21.3
UNIT WEIGHT		kg/lb	22 / 48.5	25 / 55.1
SOUND PRESSURE LEVEL (H/M/L)		dBA	38 / 36 / 34	40 / 39 / 36
NOMINAL WATER FLOW RATE		USGPM	4.00	4.98
		LITRES/M	15.14	18.85
HEAD LOSS (COOLING)		kPa / psi	20 / 2.9	32 / 4.7
HEAD LOSS (HEATING) : 50°C		kPa / psi	17 / 2.5	28 / 4
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.83	1.72
		ft/min	360.7	339.5
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE ACCORDING TO GB STD - GB/D17758. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE CENTRE OF THE UNIT. TESTED WITH 2m LENGTH DUCT AT THE AIR DISCHARGE OUTLET ANS AIR RETURN INLET.

General Data - MCC-CW

MODEL			MCC028CW	MCC038CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	26000	35200
		W	7620	10320
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	18200	24600
		W	5330	7220
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	33000	43000
		W	9670	12600
NOMINAL AIR FLOW	HIGH	l/s / CFM	382 / 810	694 / 1470
	MEDIUM	l/s / CFM	363 / 770	670 / 1420
	LOW	l/s / CFM	335 / 710	637 / 1350
EXTERNAL STATIC (H/M/L)		mmAq	8 / 7 / 6	12 / 11 / 9
UNIT DIMENSION	HEIGHT	mm/in	290 / 11.4	290 / 11.4
	WIDTH	mm/in	942 / 37.1	942 / 37.1
	DEPTH	mm/in	600 / 23.6	600 / 23.6
PACKING DIMENSION	HEIGHT	mm/in	343 / 13.5	355 / 14.0
	WIDTH	mm/in	1138 / 44.8	1461 / 57.5
	DEPTH	mm/in	690 / 27.2	727 / 28.6
UNIT WEIGHT		kg/lb	38 / 83.8	41 / 90.4
SOUND PRESSURE LEVEL (H/M/L)		dBA	41 / 38 / 34	51 / 48 / 45
NOMINAL WATER FLOW RATE		USGPM	5.77	7.84
		LITRES/M	21.84	29.68
HEAD LOSS (COOLING)		kPa / psi	24 / 3.5	49 / 7.1
HEAD LOSS (HEATING) : 50°C		kPa / psi	22 / 3.2	44 / 6.3
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.59	2.04
		ft/min	313.9	401.7
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), LEAVING WATER TEMP. : 65°C (149°F)
4) SOUND PRESSURE LEVEL ARE ACCORDING TO GB STD - GB/D17758. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE CENTRE OF THE UNIT. TESTED WITH 2m LENGTH DUCT AT THE AIR DISCHARGE OUTLET ANS AIR RETURN INLET.

General Data - MCC-CW

MODEL			MCC030CW	MCC040CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	28000	38000
		W	8210	11140
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	19900	26600
		W	5830	7800
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	36000	46000
		W	10550	13480
NOMINAL AIR FLOW	HIGH	l/s / CFM	392 / 830	500 / 1060
	MEDIUM	l/s / CFM	359 / 760	467 / 990
	LOW	l/s / CFM	335 / 710	425 / 900
EXTERNAL STATIC (H/M/L)		mmAq	17 / 13 / 9	18 / 13 / 10
UNIT DIMENSION	HEIGHT	mm/in	378 / 14.9	378 / 14.9
	WIDTH	mm/in	929 / 36.6	1045 / 41.1
	DEPTH	mm/in	541 / 21.3	541 / 21.3
PACKING DIMENSION	HEIGHT	mm/in	415 / 16.3	415 / 16.3
	WIDTH	mm/in	1126 / 44.3	1245 / 49.0
	DEPTH	mm/in	631 / 24.8	631 / 24.8
UNIT WEIGHT		kg/lb	39 / 86.0	42 / 92.6
SOUND PRESSURE LEVEL (H/M/L)		dBA	46 / 42 / 38	49 / 45 / 41
NOMINAL WATER FLOW RATE		USGPM	6.21	8.45
		LITRES/M	23.51	31.99
HEAD LOSS (COOLING)		kPa / psi	15 / 2.1	21 / 3
HEAD LOSS (HEATING) : 50°C		kPa / psi	12 / 1.8	18 / 2.6
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.40	1.57
		ft/min	275.7	308.1
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), LEAVING WATER TEMP. : 65°C (149°F)
4) SOUND PRESSURE LEVEL ARE ACCORDING TO GB STD - GB/D17758. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE CENTRE OF THE UNIT. TESTED WITH 2m LENGTH DUCT AT THE AIR DISCHARGE OUTLET ANS AIR RETURN INLET.

General Data - MCC-CW

MODEL			MCC050CW	MCC060CW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	47000	54000
		W	13770	15830
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	32900	37800
		W	9640	11080
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	57000	67000
		W	16710	19640
NOMINAL AIR FLOW	HIGH	l/s / CFM	651 / 1380	722 / 1530
	MEDIUM	l/s / CFM	604 / 1280	675 / 1430
	LOW	l/s / CFM	571 / 1210	609 / 1290
EXTERNAL STATIC (H/M/L)		mmAq	16 / 14 / 11	16 / 14 / 10
UNIT DIMENSION	HEIGHT	mm/in	378 / 14.9	378 / 14.9
	WIDTH	mm/in	1299 / 51.1	1499 / 59.0
	DEPTH	mm/in	541 / 21.3	541 / 21.3
PACKING DIMENSION	HEIGHT	mm/in	415 / 16.3	415 / 16.3
	WIDTH	mm/in	1497 / 58.9	1701 / 67.0
	DEPTH	mm/in	631 / 24.8	631 / 24.8
UNIT WEIGHT		kg/lb	54 / 119.0	63 / 136.7
SOUND PRESSURE LEVEL (H/M/L)		dBA	52 / 50 / 47	53 / 50 / 47
NOMINAL WATER FLOW RATE		USGPM	10.40	11.98
		LITRES/M	39.37	45.35
HEAD LOSS (COOLING)		kPa / psi	41 / 5.9	8 / 1.1
HEAD LOSS (HEATING) : 50°C		kPa / psi	36 / 5.2	7 / 1.0
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	1.59	1.51
		ft/min	313.0	296.5
CONNECTION			3/4" BSP FEMALE ADAPTOR	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4	

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b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 70°C (158°F), LEAVING WATER TEMP. : 65°C (149°F)
4) SOUND PRESSURE LEVEL ARE ACCORDING TO GB STD - GB/D17758. POSITION OF THE MEASUREMENT POINT IS 1.4m BELOW THE CENTRE OF THE UNIT. TESTED WITH 2m LENGTH DUCT AT THE AIR DISCHARGE OUTLET ANS AIR RETURN INLET.

General Data - MDB-BW

MODEL			MDB075BW	MDB100BW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	75600	95000
		W	22160	27840
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	56400	69400
		W	16520	20330
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	78000	97500
		W	22860	28580
NOMINAL AIR FLOW		l/s / CFM	1180 / 2500	1510 / 3200
EXTERNAL STATIC		mmAq	10.2	10.2
UNIT DIMENSION	HEIGHT	mm/in	572 / 22.5	
	WIDTH	mm/in	1502 / 59.1	
	DEPTH	mm/in	761 / 30.0	
PACKING DIMENSION	HEIGHT	mm/in	762 / 30.0	
	WIDTH	mm/in	1605 / 63.2	
	DEPTH	mm/in	880 / 34.6	
UNIT WEIGHT		kg/lb	96 / 211.6	100 / 220.5
SOUND PRESSURE LEVEL		dBA	56	57
NOMINAL WATER FLOW RATE		USGPM	16.78	21.09
		LITRES/M	63.52	79.83
HEAD LOSS (COOLING)		kPa / psi	35 / 5	42 / 6.1
HEAD LOSS (HEATING) : 50°C		kPa / psi	33 / 4.8	27 / 4
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	3.02	2.80
		ft/min	595.3	550.8
CONNECTION			1 1/8" BRAZING	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	25.4 / 1	

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a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE TESTED AT 1.4m BELOW THE UNIT (FREE RETURN AND THE DISCHARGE AIR WAS DUCTED TO ADJACENT ROOM).

General Data - MDB-BW

MODEL			MDB125BW	MDB150BW
NOMINAL TOTAL COOLING CAPACITY		Btu/h	125000	150000
		W	36640	43960
NOMINAL SENSIBLE COOLING CAPACITY		Btu/h	90000	106500
		W	26380	31210
NOMINAL TOTAL HEATING CAPACITY (ENTERING WATER TEMP. = 50°C)		Btu/h	138000	170000
		W	40450	49820
NOMINAL AIR FLOW		l/s / CFM	1982 / 4200	2171 / 4600
EXTERNAL STATIC		mmAq	15.2	10.2
UNIT DIMENSION	HEIGHT	mm/in	885 / 34.8	
	WIDTH	mm/in	1640 / 64.6	
	DEPTH	mm/in	1040 / 40.9	
PACKING DIMENSION	HEIGHT	mm/in	1154 / 45.4	
	WIDTH	mm/in	1787 / 70.4	
	DEPTH	mm/in	1188 / 46.8	
UNIT WEIGHT		kg/lb	140 / 308.6	145 / 319.7
SOUND PRESSURE LEVEL		dBA	58	59
NOMINAL WATER FLOW RATE		USGPM	27.74	33.29
		LITRES/M	105.01	126.02
HEAD LOSS (COOLING)		kPa / psi	49 / 7.1	53 / 7.7
HEAD LOSS (HEATING) : 50°C		kPa / psi	32 / 4.6	63 / 9.2
MAX. WORKING PRESSURE		kPa / psi	1608 / 233	
SURFACE AIR VELOCITY		m/s	3.30	2.09
		ft/min	650.2	411.1
CONNECTION			1 1/8" BRAZING	
CONTROL	AIR DISCHARGE		DUCTED	
	OPERATION		SLM WIRED HANDSET	
CONDENSATE DRAIN SIZE		mm/in	25.4 / 1	

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a) COOLING - ENTERING AIR TEMP. : 27°C (80.6°F) DB / 19°C (66.2°F) WB, ENTERING WATER TEMP. : 7°C (44.6°F), LEAVING WATER TEMP. : 12°C (53.6°F)
b) HEATING - ENTERING AIR TEMP.: 20°C (68°F) DB, ENTERING WATER TEMP. : 50°C (122°F), WATER FLOW RATE BASED ON COOLING CYCLE.
4) SOUND PRESSURE LEVEL ARE TESTED AT 1.4m BELOW THE UNIT (FREE RETURN AND THE DISCHARGE AIR WAS DUCTED TO ADJACENT ROOM).

Components Data - MWM-GW

MODEL				MWM007GW	MWM010GW
FAN	TYPE			ANTI FUNGUS SKEW FAN	
	QUANTITY			1	1
	MATERIAL			ACRYLO NITRILE STYRENE	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	617.5 x 97 / 24.3 x 3.8	717.5 x 97 / 28.2 x 3.8
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			-	-
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER	
		DIAMETER	mm/in	7.00 / 0.28	
		THICKNESS	mm/in	0.35 / 0.014	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.20 / 2.15	0.23 / 2.48
		ROW		2	2
		FIN PER INCH		18	18
	WATER VOLUME		litre	0.49	0.57
AIR FILTER	MATERIAL			WASHABLE SARANNET (NANO FILTER)	
	SIZE	LENGTH	mm/in	304 / 11.9	304 / 11.9
		WIDTH	mm/in	298 / 11.7	348 / 13.7
		THICKNESS	mm/in	1.5 / 0.06	1.5 / 0.06
CASING	MATERIAL			HIGH IMPACT POLYSTYRENE	
	COLOUR			LIGHT GREY	

MODEL				MWM015GW	MWM020GW
FAN	TYPE			CROSS FLOW FAN	
	QUANTITY			1	1
	MATERIAL			ACRYLO NITRILE STYRENE	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	717.5 x 97 / 28.2 x 3.8	810 x 108 / 31.9 x 4.3
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			-	-
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER	
		DIAMETER	mm/in	7.00 / 0.28	
		THICKNESS	mm/in	0.35 / 0.014	
	FIN	MATERIAL		ALUMINIUM	ALUMINIUM
		THICKNESS	mm/in	0.11 / 0.004	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.23 / 2.48	0.27 / 2.90
		ROW		2	2
		FIN PER INCH		18	18
	WATER VOLUME		litre	0.57	0.85
AIR FILTER	MATERIAL			WASHABLE SARANNET (NANO FILTER)	
	SIZE	LENGTH	mm/in	304 / 11.9	351 / 13.8
		WIDTH	mm/in	348 / 13.7	386 / 15.2
		THICKNESS	mm/in	1.5 / 0.06	1.5 / 0.06
CASING	MATERIAL			HIGH IMPACT POLYSTYRENE	
	COLOUR			LIGHT GREY	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data - MWM301W

MODEL				MWM025GW	MWM301W
FAN	TYPE			CROSS FLOW FAN	
	QUANTITY			1	1
	MATERIAL			ACRYLO NITRILE STYRENE	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	810 x 108 / 31.9 x 4.3	953 x 106 / 37.5 x 4.2
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			-	-
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER	PLAIN COPPER
		DIAMETER	mm/in	7.00 / 0.28	9.52 / 0.37
		THICKNESS	mm/in	0.35 / 0.014	0.35 / 0.014
	FIN	MATERIAL		ALUMINIUM	ALUMINIUM
		THICKNESS	mm/in	0.11 / 0.004	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.27 / 2.90	0.29 / 3.12
		ROW		2	2
		FIN PER INCH		18	16
	WATER VOLUME		litre	0.85	1.43
AIR FILTER	MATERIAL			WASHABLE SARANNET (NANO FILTER)	
	SIZE	LENGTH	mm/in	351 / 13.8	317 / 12.5
		WIDTH	mm/in	386 / 15.2	330 / 13.0
		THICKNESS	mm/in	1.5 / 0.06	1.5 / 0.06
CASING	MATERIAL			HIGH IMPACT POLYSTYRENE	
	COLOUR			LIGHT GREY	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data - MCK-AW

MODEL				MCK020AW	MCK025AW
FAN	TYPE			TURBO FAN	
	QUANTITY			1	
	MATERIAL			ASG20	
	DRIVE			DIRECT	
	DIAMETER		mm/in	450 / 17.7	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.3 / 0.013	
	FIN	MATERIAL		ALUMINIUM SLIT FIN	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.47 / 5.02	0.47 / 5.02
		ROW		2	2
		FIN PER INCH		16	16
	WATER VOLUME		litre	2.69	2.69
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	SIZE	LENGTH	mm/in	576 / 22.7	
		WIDTH	mm/in	556 / 21.9	
		THICKNESS	mm/in	22 / 0.9	
CASING	MATERIAL (PANEL)			GALVANIZED IRON	
	PANEL COLOUR			LIGHT GREY	

MODEL				MCK030AW	MCK040AW
FAN	TYPE			TURBO FAN	
	QUANTITY			1	
	MATERIAL			ASG20	
	DRIVE			DIRECT	
	DIAMETER		mm/in	450 / 17.7	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.3 / 0.013	
	FIN	MATERIAL		ALUMINIUM SLIT FIN	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.47 / 5.02	
		ROW		2	2
		FIN PER INCH		16	16
	WATER VOLUME		litre	2.69	2.69
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	SIZE	LENGTH	mm/in	576 / 22.7	
		WIDTH	mm/in	556 / 21.9	
		THICKNESS	mm/in	22 / 0.9	
CASING	MATERIAL (PANEL)			GALVANIZED IRON	
	PANEL COLOUR			LIGHT GREY	

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Components Data - MCK-AW

MODEL				MCK050AW
FAN	TYPE			TURBO FAN
	QUANTITY			1
	MATERIAL			ASG20
	DRIVE			DIRECT
	DIAMETER		mm/in	450 / 17.7
FAN MOTOR	TYPE			INDUCTION
	QUANTITY			1
	INDEX OF PROTECTION (IP)			IP22
COIL	TYPE			CROSS FINNED TUBES
	TUBE	MATERIAL		PLAIN TUBE
		DIAMETER	mm/in	9.52 / 3/8
		THICKNESS	mm/in	0.3 / 0.013
	FIN	MATERIAL		ALUMINIUM SLIT FIN
		THICKNESS	mm/in	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.47 / 5.02
		ROW		2
		FIN PER INCH		16
	WATER VOLUME		litre	2.69
AIR FILTER	MATERIAL			WASHABLE SARANNET
	SIZE	LENGTH	mm/in	576 / 22.7
		WIDTH	mm/in	556 / 21.9
		THICKNESS	mm/in	22 / 0.9
CASING	MATERIAL (PANEL)			GALVANIZED IRON
	PANEL COLOUR			LIGHT GREY

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Components Data - MCK-AWH

MODEL				MCK020AWH	MCK025AWH
FAN	TYPE			TURBO FAN	
	QUANTITY			1	
	MATERIAL			ASG20	
	DRIVE			DIRECT	
	DIAMETER		mm/in	450 / 17.7	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.3 / 0.013	
	FIN	MATERIAL		ALUMINIUM SLIT FIN	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.47 / 5.02	0.47 / 5.02
		ROW		2	2
		FIN PER INCH		16	16
	WATER VOLUME		litre	1.34	1.34
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	SIZE	LENGTH	mm/in	576 / 22.7	
		WIDTH	mm/in	556 / 21.9	
		THICKNESS	mm/in	22 / 0.9	
CASING	MATERIAL (PANEL)			GALVANIZED IRON	
	PANEL COLOUR			LIGHT GREY	

MODEL				MCK030AWH	MCK040AWH
FAN	TYPE			TURBO FAN	
	QUANTITY			1	
	MATERIAL			ASG20	
	DRIVE			DIRECT	
	DIAMETER		mm/in	450 / 17.7	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.3 / 0.013	
	FIN	MATERIAL		ALUMINIUM SLIT FIN	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.47 / 5.02	
		ROW		2	2
		FIN PER INCH		16	16
	WATER VOLUME		litre	1.34	1.34
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	SIZE	LENGTH	mm/in	576 / 22.7	
		WIDTH	mm/in	556 / 21.9	
		THICKNESS	mm/in	22 / 0.9	
CASING	MATERIAL (PANEL)			GALVANIZED IRON	
	PANEL COLOUR			LIGHT GREY	

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Components Data - MCK-AWH

MODEL				MCK050AWH
FAN	TYPE			TURBO FAN
	QUANTITY			1
	MATERIAL			ASG20
	DRIVE			DIRECT
	DIAMETER		mm/in	450 / 17.7
FAN MOTOR	TYPE			INDUCTION
	QUANTITY			1
	INDEX OF PROTECTION (IP)			IP22
COIL	TYPE			CROSS FINNED TUBES
	TUBE	MATERIAL		PLAIN TUBE
		DIAMETER	mm/in	9.52 / 3/8
		THICKNESS	mm/in	0.3 / 0.013
	FIN	MATERIAL		ALUMINIUM SLIT FIN
		THICKNESS	mm/in	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.47 / 5.02
		ROW		2
		FIN PER INCH		16
	WATER VOLUME		litre	1.34
AIR FILTER	MATERIAL			WASHABLE SARANNET
	SIZE	LENGTH	mm/in	576 / 22.7
		WIDTH	mm/in	556 / 21.9
		THICKNESS	mm/in	22 / 0.9
CASING	MATERIAL (PANEL)			GALVANIZED IRON
	PANEL COLOUR			LIGHT GREY

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Components Data - MCK-CW

MODEL				MCK010CW	MCK015CW
FAN	TYPE			TURBO FAN	
	QUANTITY			1	1
	MATERIAL			ASG20	
	DRIVE			DIRECT	
	DIAMETER		mm/in	330 / 13.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			NA	NA
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN TUBE	
		DIAMETER	mm/in	7.00 / 0.276	
		THICKNESS	mm/in	0.35 / 0.014	
	FIN	MATERIAL		ALUMINIUM SLIT FIN	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.24 / 2.583	0.309 / 3.323
		ROW		1	2
		FIN PER INCH		16	20
	WATER VOLUME		litre	0.56	1.15
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	SIZE	LENGTH	mm/in	388 / 15.3	
		WIDTH	mm/in	381 / 15	
		THICKNESS	mm/in	21 / 0.8	
CASING	MATERIAL (PANEL)			GALVANIZED IRON	
	PANEL COLOUR			LIGHT GREY	

MODEL				MCK020CW
FAN	TYPE			TURBO FAN
	QUANTITY			1
	MATERIAL			ASG20
	DRIVE			DIRECT
	DIAMETER		mm/in	330 / 13.0
FAN MOTOR	TYPE			INDUCTION
	QUANTITY			1
	INDEX OF PROTECTION (IP)			NA
COIL	TYPE			CROSS FINNED TUBES
	TUBE	MATERIAL		PLAIN TUBE
		DIAMETER	mm/in	7.00 / 0.276
		THICKNESS	mm/in	0.35 / 0.014
	FIN	MATERIAL		ALUMINIUM SLIT FIN
		THICKNESS	mm/in	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.31 / 3.323
		ROW		2
		FIN PER INCH		20
	WATER VOLUME		litre	1.15
AIR FILTER	MATERIAL			WASHABLE SARANNET
	SIZE	LENGTH	mm/in	388 / 15.3
		WIDTH	mm/in	381 / 15
		THICKNESS	mm/in	21 / 0.8
CASING	MATERIAL (PANEL)			GALVANIZED IRON
	PANEL COLOUR			LIGHT GREY

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Components Data - MCM-DW

MODEL				MCM020DW	MCM025DW
FAN	TYPE			CROSS FLOW FAN	
	QUANTITY			2	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.19 / 2.05	0.19 / 2.05
		ROW		3	3
		FIN PER INCH		12	12
	WATER VOLUME		litre	1.68	1.68
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	
	SIZE	LENGTH	mm/in	544 / 21.4	
		WIDTH	mm/in	270 / 10.6	
		THICKNESS	mm/in	3 / 0.1	
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

MODEL				MCM030DW
FAN	TYPE			CROSS FLOW FAN
	QUANTITY			3
	MATERIAL			ABS
	DRIVE			DIRECT
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9
FAN MOTOR	TYPE			INDUCTION
	QUANTITY			1
	INDEX OF PROTECTION (IP)			IP22
COIL	TYPE			CROSS FINNED TUBES
	TUBE	MATERIAL		PLAIN COPPER TUBE
		DIAMETER	mm/in	9.52 / 3/8
		THICKNESS	mm/in	0.33 / 0.013
	FIN	MATERIAL		ALUMINIUM
		THICKNESS	mm/in	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.24 / 2.58
		ROW		3
		FIN PER INCH		12
	WATER VOLUME		litre	2.09
AIR FILTER	MATERIAL			WASHABLE SARANET
	QUANTITY		PC/S	2
	SIZE	LENGTH	mm/in	544 / 21.4
		WIDTH	mm/in	270 / 10.6
		THICKNESS	mm/in	3 / 0.1
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL
	COLOUR			LIGHT GREY

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Components Data - MCM-DW

MODEL				MCM040DW	MCM050DW
FAN	TYPE			CROSS FLOW FAN	
	QUANTITY			4	
	MATERIAL			ABS	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.37 / 3.98	
		ROW		4	4
		FIN PER INCH		12	14
	WATER VOLUME		litre	4.25	2.03
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2 + 1	2 + 3
	SIZE (L x W x t)		mm	544 x 270 x 3 (2 pcs)	500 x 285 x 3 (2 pcs)
			mm	494 x 270 x 3 (1 pc)	400 x 285 x 3 (3 pc)
			in	21.4 x 10.6 x 0.1 (2 pcs)	19.7 x 11.2 x 0.1 (2 pcs)
			in	19.4 x 10.6 x 0.1 (1 pc)	15.7 x 10.6 x 0.1 (3 pcs)
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

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Components Data - MCM-CBW

MODEL				MCM007CBW	MCM010CBW
FAN	TYPE			CROSS FLOW FAN	
	QUANTITY			1	1
	MATERIAL			ABS	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.12 / 1.31	
		ROW		2	
		FIN PER INCH		14	
	WATER VOLUME		litre	0.7	
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	
	SIZE	LENGTH	mm/in	390 / 15.4	
		WIDTH	mm/in	292 / 11.5	
		THICKNESS	mm/in	3 / 0.1	
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

MODEL				MCM015CBW
FAN	TYPE			CROSS FLOW FAN
	QUANTITY			2
	MATERIAL			ABS
	DRIVE			DIRECT
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9
FAN MOTOR	TYPE			INDUCTION
	QUANTITY			1
	INDEX OF PROTECTION (IP)			IP22
COIL	TYPE			CROSS FINNED TUBES
	TUBE	MATERIAL		PLAIN COPPER TUBE
		DIAMETER	mm/in	9.52 / 3/8
		THICKNESS	mm/in	0.33 / 0.013
	FIN	MATERIAL		ALUMINIUM
		THICKNESS	mm/in	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.19 / 2.01
		ROW		3
		FIN PER INCH		12
	WATER VOLUME		litre	2.09
AIR FILTER	MATERIAL			WASHABLE SARANNET
	QUANTITY		PC/S	2
	SIZE	LENGTH	mm/in	390 / 15.4
		WIDTH	mm/in	292 / 11.5
		THICKNESS	mm/in	3 / 0.1
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL
	COLOUR			LIGHT GREY

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Components Data - MCM-EW

MODEL				MCM015EW	MCM020EW
FAN	TYPE			CROSS FLOW FAN	
	QUANTITY			2	2
	MATERIAL			ABS	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	7.00 / 1/4	
		THICKNESS	mm/in	0.35 / 0.014	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.33 / 3.55	
		ROW		3	
		FIN PER INCH		18	
	WATER VOLUME		litre	1.11	
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	
	SIZE	LENGTH	mm/in	300 / 11.8	
		WIDTH	mm/in	383 / 15.1	
		THICKNESS	mm/in	2 / 0.1	
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

MODEL				MCM025EW
FAN	TYPE			CROSS FLOW FAN
	QUANTITY			2
	MATERIAL			ABS
	DRIVE			DIRECT
	LENGTH x DIAMETER		mm/in	146 x 200 / 5.8 x 7.9
FAN MOTOR	TYPE			INDUCTION
	QUANTITY			1
	INDEX OF PROTECTION (IP)			IP22
COIL	TYPE			CROSS FINNED TUBES
	TUBE	MATERIAL		PLAIN COPPER TUBE
		DIAMETER	mm/in	7.00 / 1/4
		THICKNESS	mm/in	0.35 / 0.014
	FIN	MATERIAL		ALUMINIUM
		THICKNESS	mm/in	0.11 / 0.004
		FACE AREA	m^2 / ft^2	0.33 / 3.55
		ROW		3
		FIN PER INCH		18
	WATER VOLUME		litre	1.11
AIR FILTER	MATERIAL			WASHABLE SARANNET
	QUANTITY		PC/S	2
	SIZE	LENGTH	mm/in	300 / 11.8
		WIDTH	mm/in	383 / 15.1
		THICKNESS	mm/in	2 / 0.1
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL
	COLOUR			LIGHT GREY

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Components Data - MCC-CW

MODEL				MCC010CW	MCC015CW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			1	2
	MATERIAL			METAL	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	160 x 202 / 6.3 x 8.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			IP22	IP22
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.11 / 1.18	0.14 / 1.50
		ROW		3	3
		FIN PER INCH		12	14
	WATER VOLUME		litre	1.03	1.27
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	1	1
	SIZE	LENGTH	mm/in	560 / 22.1	700 / 27.6
		WIDTH	mm/in	195 / 7.7	195 / 7.7
		THICKNESS	mm/in	5 / 0.2	5 / 0.2
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

MODEL				MCC020CW	MCC025CW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			2	
	MATERIAL			METAL	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	160 x 202 / 6.3 x 8.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			IP22	IP22
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.18 / 1.94	0.20 / 2.15
		ROW		3	3
		FIN PER INCH		12	12
	WATER VOLUME		litre	1.55	1.78
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	1	1
	SIZE	LENGTH	mm/in	860 / 33.9	995 / 39.2
		WIDTH	mm/in	195 / 7.7	195 / 7.7
		THICKNESS	mm/in	5 / 0.2	5 / 0.2
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data - MCC-CW

MODEL				MCC028CW	MCC038CW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			2	2
	MATERIAL			METAL	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	185 x 202 / 7.3 x 8.0	210 x 203 / 8.4 x 8.0
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			IP22	IP22
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.24 / 2.58	0.34 / 3.66
		ROW		3	3
		FIN PER INCH		12	14
	WATER VOLUME		litre	2.03	2.94
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	2
	SIZE	LENGTH	mm/in	456 / 18.0	608 / 23.9
		WIDTH	mm/in	210 / 8.3	230 / 9.1
		THICKNESS	mm/in	5 / 0.2	5 / 0.2
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

MODEL				MCC030CW	MCC040CW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			2	2
	MATERIAL			METAL	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	210 x 202 / 8.4 x 8.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			IP22	IP22
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.28 / 3.01	0.32 / 3.44
		ROW		3	3
		FIN PER INCH		12	12
	WATER VOLUME		litre	2.45	2.8
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	2
	SIZE	LENGTH	mm/in	449 / 17.7	507 / 20.0
		WIDTH	mm/in	305 / 12.0	305 / 12.0
		THICKNESS	mm/in	5 / 0.2	5 / 0.2
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data - MCC-CW

MODEL				MCC050CW	MCC060CW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			2	2
	MATERIAL			METAL	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	214 x 203 / 8.4 x 8.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	1
	INDEX OF PROTECTION (IP)			IP22	IP22
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.41 / 4.41	0.48 / 5.16
		ROW		3	3
		FIN PER INCH		12	14
	WATER VOLUME		litre	3.56	4.16
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	2
	SIZE	LENGTH	mm/in	634 / 25.0	734 / 29.0
		WIDTH	mm/in	305 / 12.0	305 / 12.0
		THICKNESS	mm/in	5 / 0.2	5 / 0.2
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data - MDB-BW

MODEL				MDB075BW	MDB100BW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			2	2
	MATERIAL			METAL	
	DRIVE			DIRECT	
	DIAMETER		mm/in	203 / 8.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			2	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.39 / 4.20	0.54 / 5.81
		ROW		4	4
		FIN PER INCH		14	12
	WATER VOLUME		litre	4.53	6.27
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	2	
	SIZE	LENGTH	mm/in	622 / 24.5	
		WIDTH	mm/in	433 / 17.0	
		THICKNESS	mm/in	5 / 0.2	
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

MODEL				MDB125BW	MDB150BW
FAN	TYPE			CENTRIFUGAL	
	QUANTITY			1	2
	MATERIAL			METAL	
	DRIVE			DIRECT	
	LENGTH x DIAMETER		mm/in	381 / 15.0	
FAN MOTOR	TYPE			INDUCTION	
	QUANTITY			1	
	INDEX OF PROTECTION (IP)			IP22	
COIL	TYPE			CROSS FINNED TUBES	
	TUBE	MATERIAL		PLAIN COPPER TUBE	
		DIAMETER	mm/in	9.52 / 3/8	
		THICKNESS	mm/in	0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM	
		THICKNESS	mm/in	0.11 / 0.004	
		FACE AREA	m^2 / ft^2	0.60 / 6.46	0.54 / 5.81
		ROW		3	4
		FIN PER INCH		14	12
	WATER VOLUME		litre	8.14	6.27
AIR FILTER	MATERIAL			WASHABLE SARANNET	
	QUANTITY		PC/S	3	
	SIZE	LENGTH	mm/in	459 / 18.1	
		WIDTH	mm/in	738 / 29.1	
		THICKNESS	mm/in	46 / 1.8	
CASING	MATERIAL			ELECTRO-GALVANIZED MILD STEEL	
	COLOUR			LIGHT GREY	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Performance Data

Unit Selection Procedure

The cooling and heating capacities of the fan coil units can be determined by the Cooling Capacity Performance Chart and Heating Capacity Performance Chart in the following pages based on nominal air flow at standard water temperature. The total and sensible capacities must be adjusted as variables come in. A sample of selection procedure is given as below:

Step 1
Determine type of fan coil units to be used, i.e. ceiling cassette (MCK-AW Series); ceiling exposed (MCM-DW Series); etc.

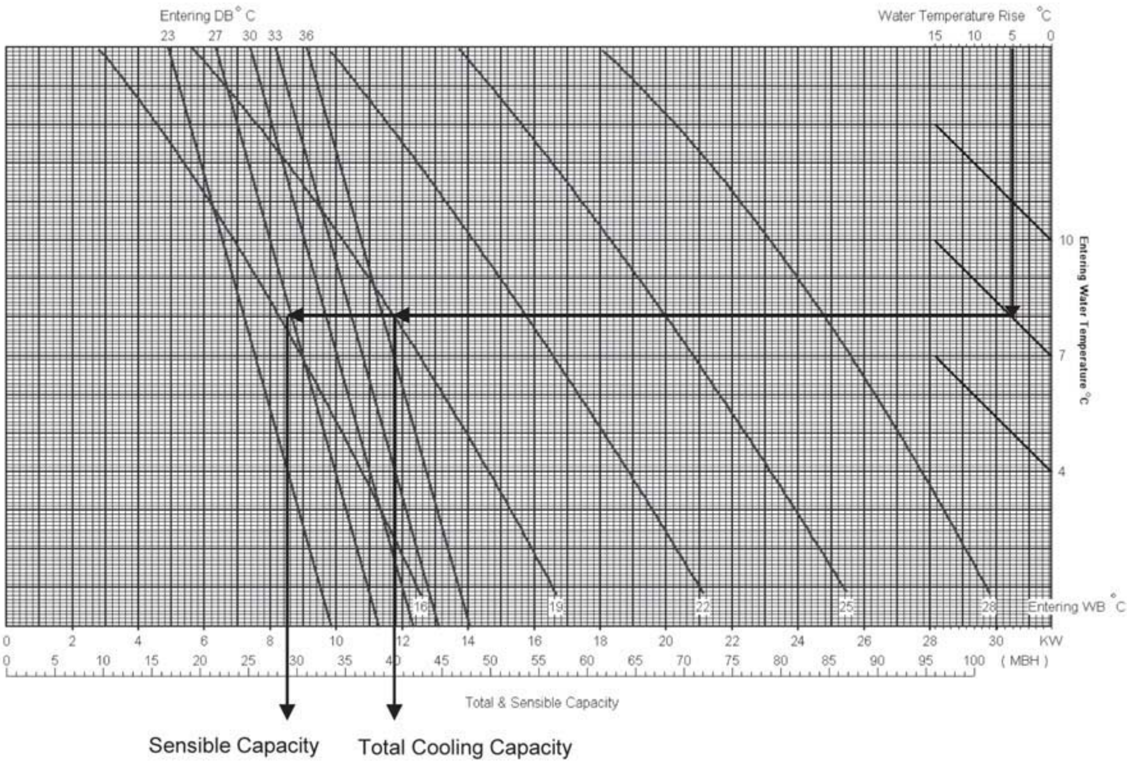
Step 2
Select a tentative unit size based on cooling capacities at nominal air flow. Design entering air temperatures and required water flows from cooling capacities chart **<u>(Page 93 - 136)</u>** or the nominal capacities ratings **<u>(Page 50 - 74)</u>** from standard specification.

Step 3
Determine the nominal unit cooling capacities for the unit selected. If the cooling capacities chart must be used, the following information must be known :-

a) Design water temperature rise
b) Design entering water temperature
c) Design entering air dry bulb temperature
d) Design entering air wet bulb temperature

Example of how to read the cooling performance chart.

MCK050AW (ISO)



Step 4
If air flow value is different from the nominal value(high speed), then refer to specification from **<u>Page 50 to 74</u>** for the air flow required (medium or low speed). Determine the total and sensible correction factor from Air Flow Capacity Correction Factor **<u>(Page 49</u>**).

Step 5
If the unit is to operate at an altitude above sea level, multiply the capacity correction factors by an Altitude Correction Factors. Refer to **<u>Page 49.</u>**

Step 6
Calculate the actual cooling capacity by multiply the nominal capacity (from Step 3) with Air Flow Capacity Correction Factor from Step 4 and the Altitude Correction Factor from Step 5.

Actual Capacity, W = Nominal capacity (Step 3) x Air Flow Capacity Correction Factor (Step 4) x Altitude Correction Factor (Step 5)

Step 7
Water flow rate can be determined by:

$$\text{Litres/Min} = \frac{\text{Total Cooling Capacity, W}}{70 \times \text{Water Temperature Rise °C}}$$

$$\text{USGPM} = \frac{\text{Total Cooling Capacity, Btu/H}}{500 \times \text{Water Temperature Rise °F}}$$

Step 8
Heating Capacities at nominal air flow (**<u>Page 137 to 141</u>** - Heating Performance Chart) are based on standard condition of 60°C EWT and 21°C EAT. The actual heating capacity can be obtained by using the Heating Capacity Correction Factor **<u>(Page 49)</u>** and Altitude Correction Factor as per Step 5.

Hence Actual Heating Capacity, W = Nominal Capacity **<u>(Page 137 to 141)</u>** x
Heating Capacity Correction Factor **<u>(Page 49)</u>** x
Air Flow Capacity Correction Factor (Step 4) x
Altitude Correction Factor (Step 5)

Step 9
Water Pressure Drop Tables are on **<u>Page 43 to 48.</u>**

EXAMPLE
Select a ceiling cassette type fan coil unit at the following design specification:

Room design condition	: 27°C DB / 19°C WB
Room Cooling Load	: 8 kW sensible capacity / 11 kW total capacity
Room Heating Load	: 22 kW
Entering water temperature	: 7°C cooling / 70°C heating
Water temperature rise	: 5°C
Air Volume	: 1000 CFM
Altitude	: 600 m

<u>SOLUTION</u>
Step 1
Based on the type of fan coil required and the design conditions, tentatively select MCK050AW. From the cooling capacity performance chart **<u>(Page 114)</u>**, at 26.7°C DB / 19°C WB air temperature, 7°C entering water temperature and with 5°C water temperature rise, the cooling capacity for this unit is 11.7 kW total capacity and 8.5 kW sensible capacity.

Step 2
From **page 49**, the air flow correction factor table, at high speed, the air volume is 1040 CFM and medium speed is 950 CFM, hence high speed is selected. And the correction factor is hence 1.0.

If lower air flow required, then use the medium and low fan speed. The correction factor can be determined by getting the ratio of air flow (i.e. medium or low speed / high speed).

Step 3
As the unit is operating at 600m above sea level, the Altitude correction factor is 0.98 total and 0.93 sensible.

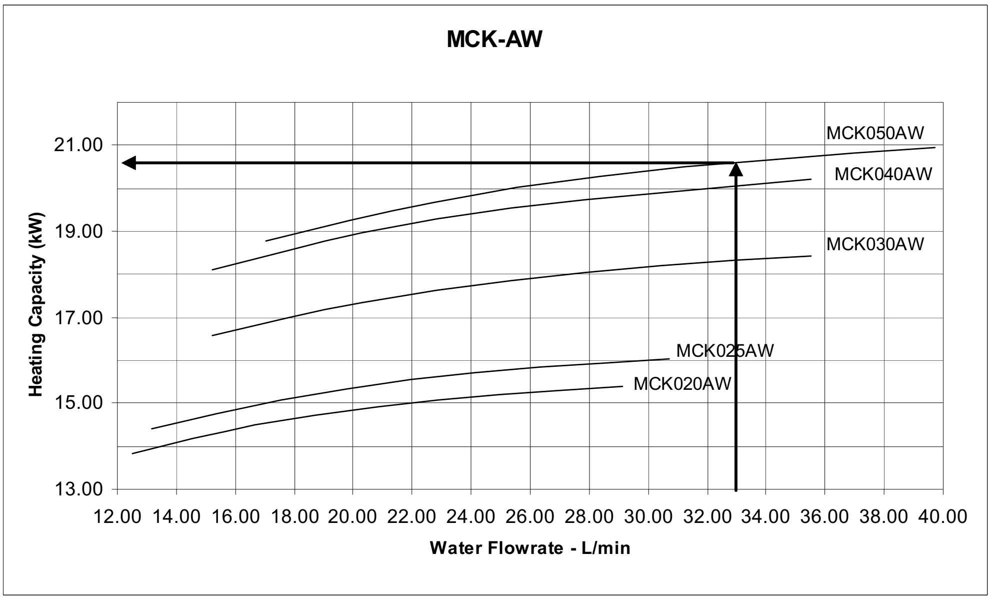
Step 4
Multiply the cooling capacities obtained from step 1 (as per specification and design condition) by correction factors from (2) and (3)

Actual total cooling capacity = 11.7 x 1.0 x 0.98 kW = 11.47 kW

Actual sensible cooling capacity = 8.5 x 1.0 x 0.93 kW = 7.91 kW

Step 5
Water flow rate = Litres/M = $\frac{11470 \text{ W}}{70 \times 5}$ = 32.8

Step 6
From Heating Capacity Performance Chart **(Page 138)**, determine the heating capacity at the nominal air volume by using the flow rate calculated in step 5. The heating capacity is at 20.6 kW.



Step 7
From Heating Capacity Correction Factor Tables at 70°C water entering temperature and 26.7°C entering air temperature, the correction factor is 1.1261,

Actual Heating Capacity = 20.6 x 0.98 x 1.1261 = 22.7 kW

Step 8
Water Pressure Drop can be estimated from water Pressure Drop Table **(Page 43 to 48)** using interpolate method:

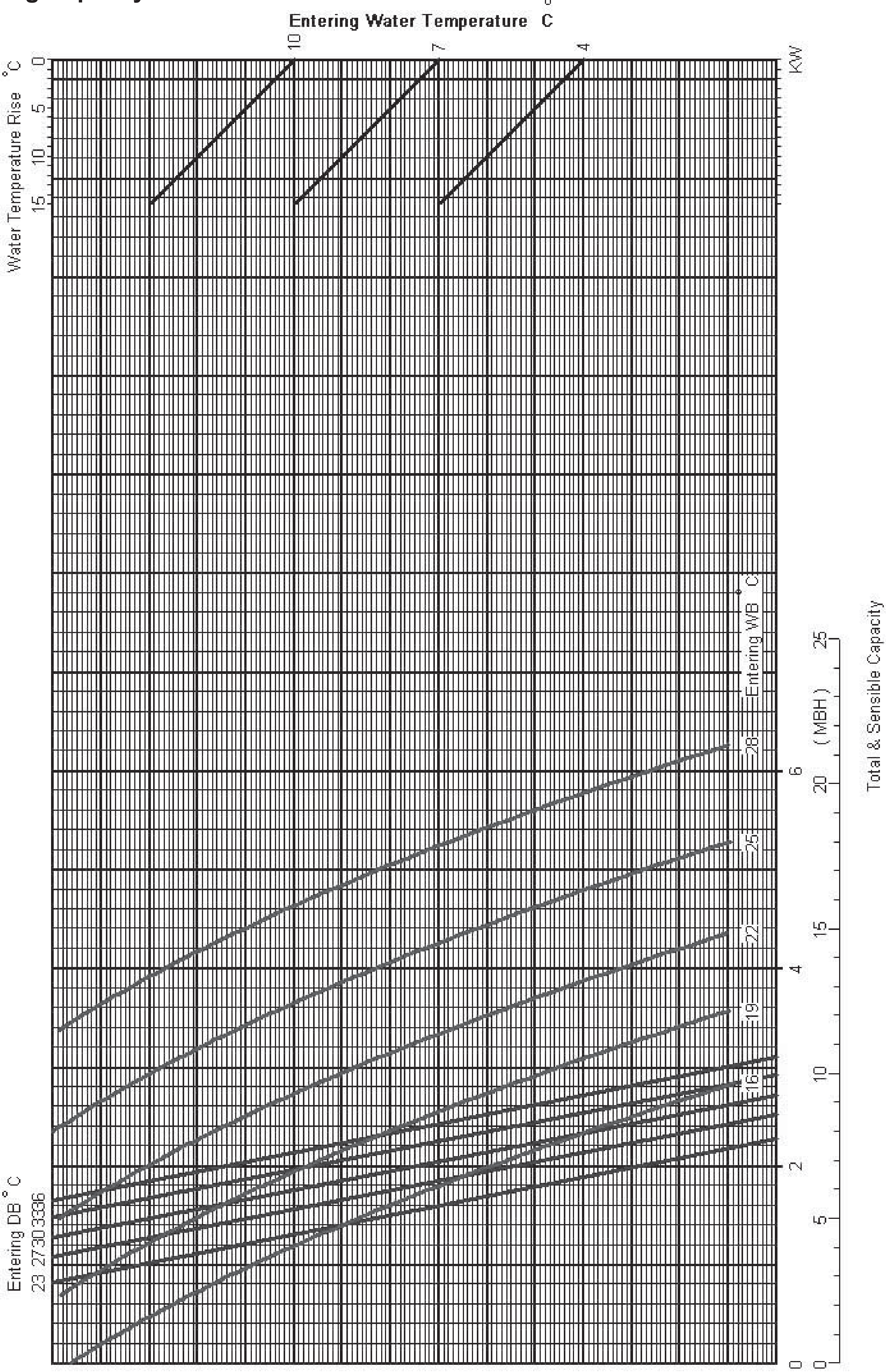
At flow rate of 32.8 Litres/Min, the nominal pressure drop is 39.14 kPa

Pressure drop correction factor = 1.2947 - 0.0021 x (EWT°C x 1.8 + 32) = 0.9629

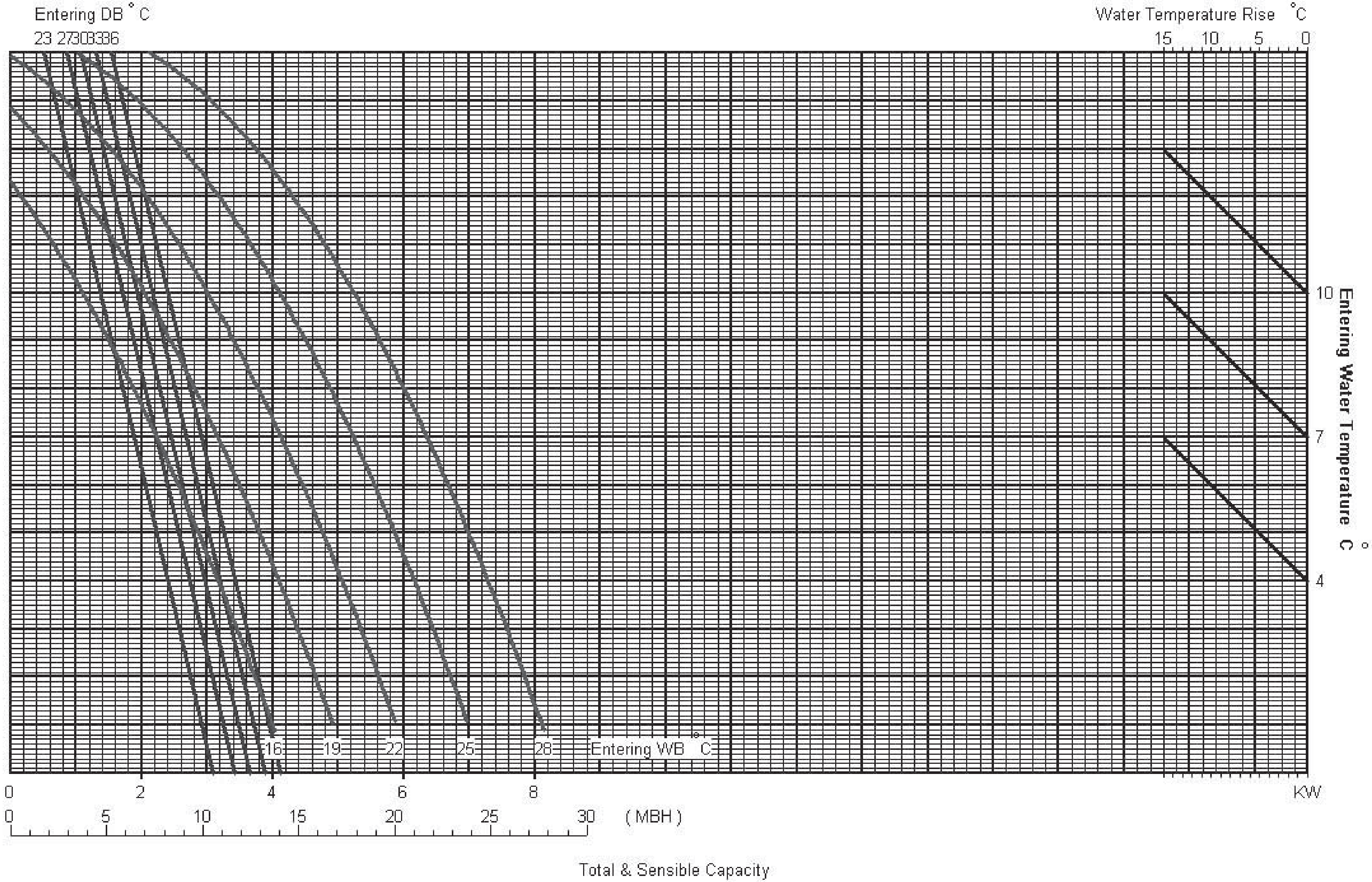
Hence the actual pressure drop = nominal pressure drop x correction factor = 37.69 kPa.

Cooling Capacity Performance Chart

MWM007GW

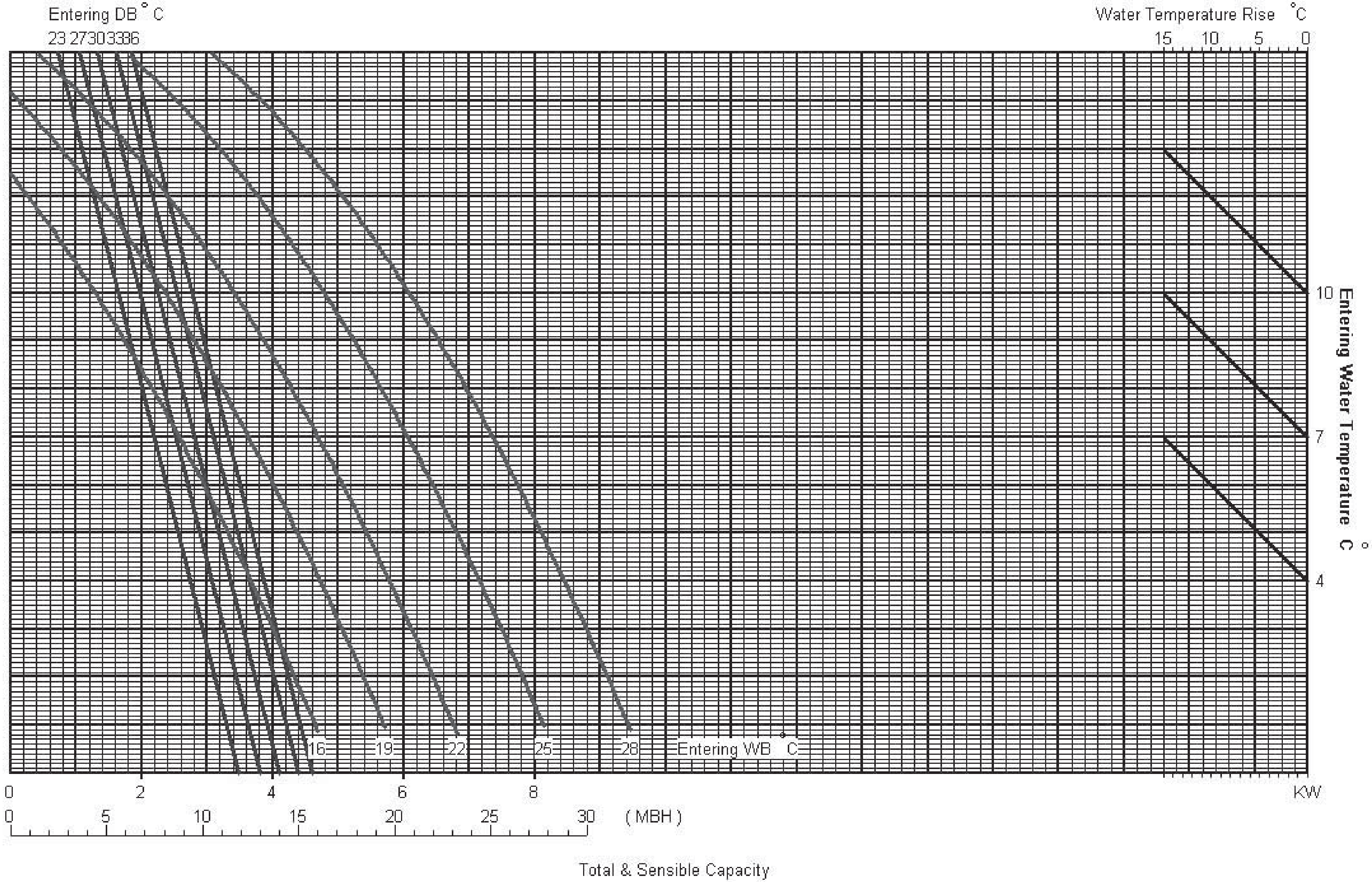


MWM010GW



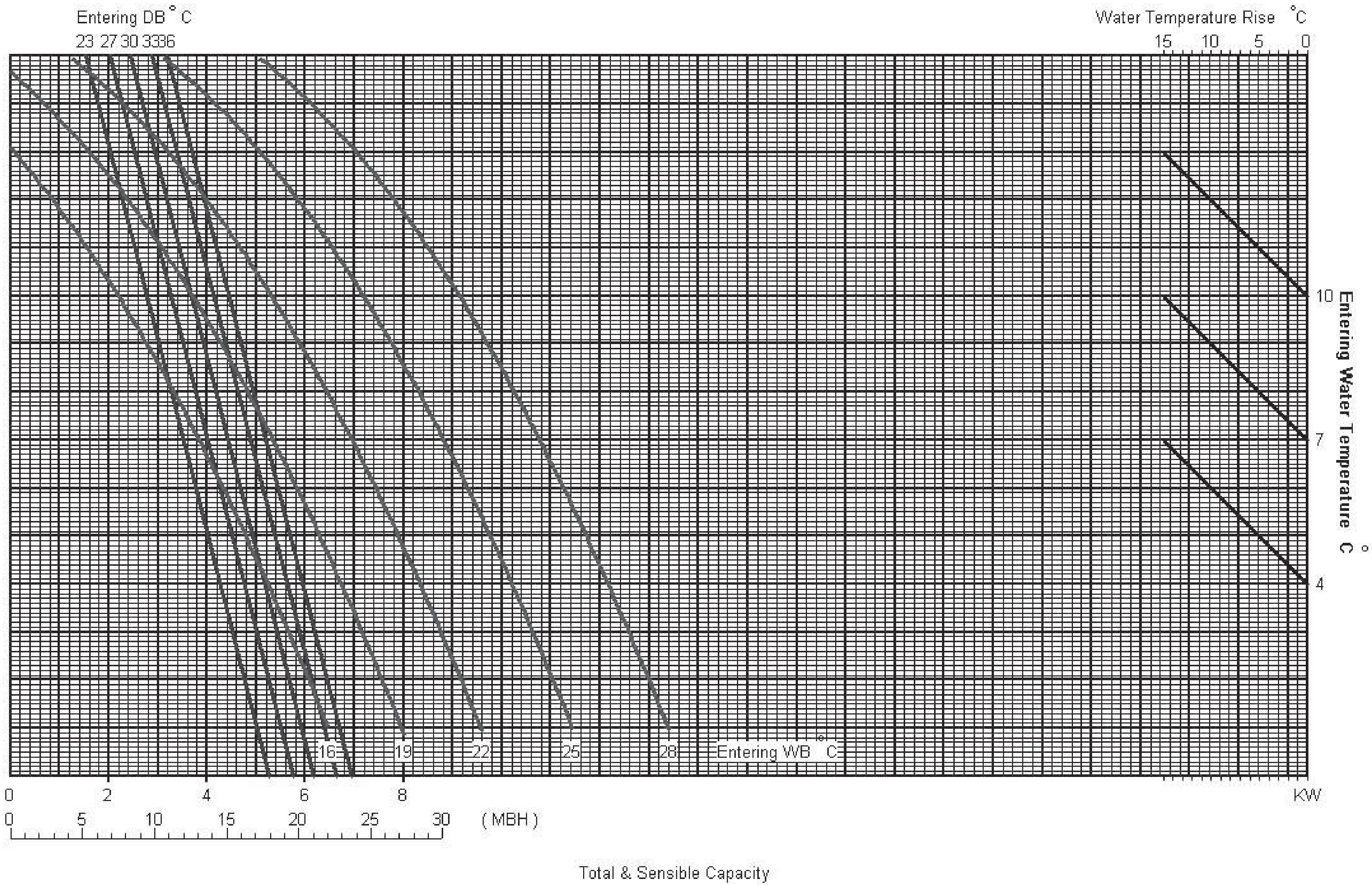
Entering DB °C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 8 KW
0 5 10 15 20 25 30 (MBH)
Total & Sensible Capacity

MWM015GW



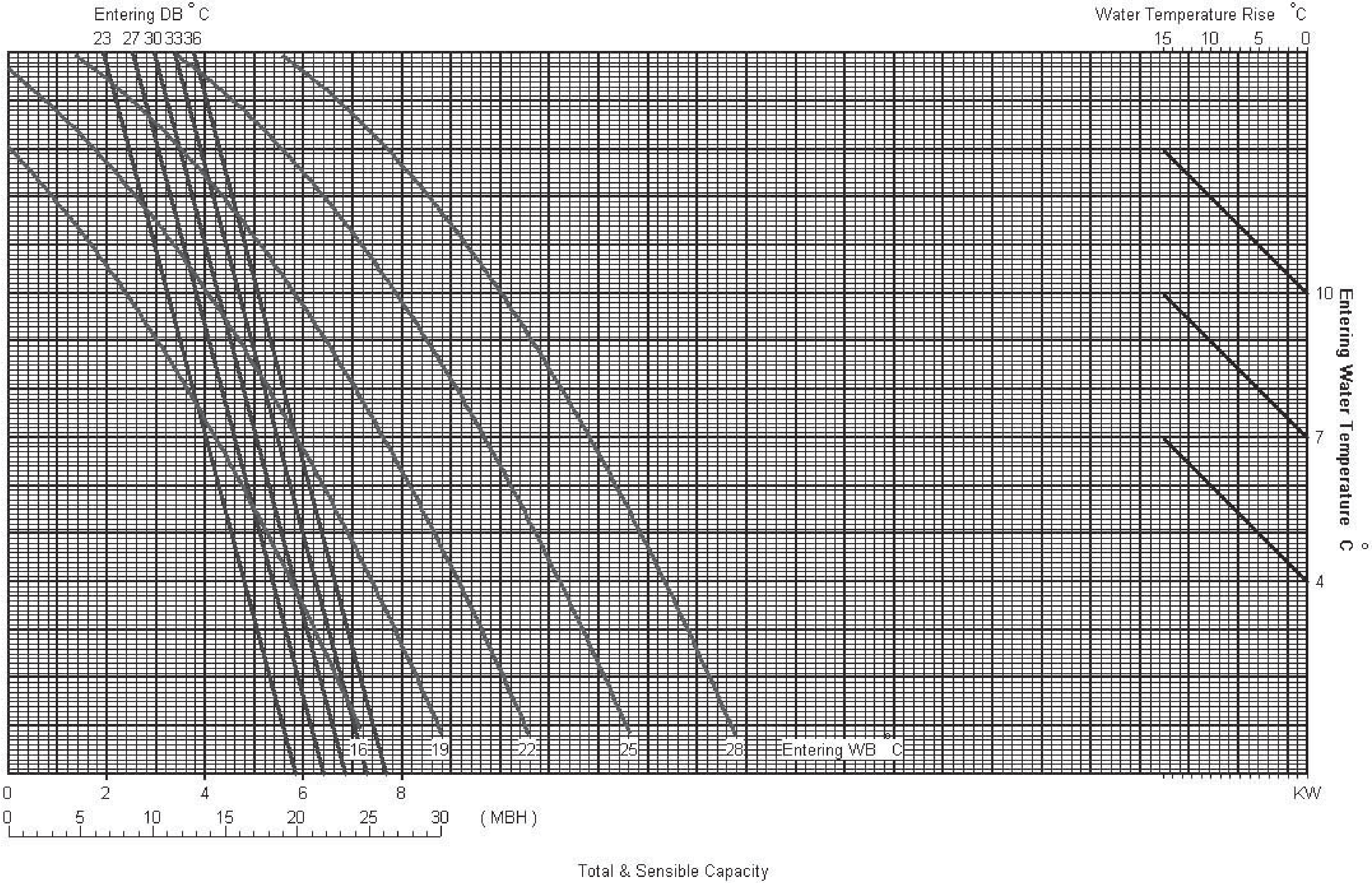
Entering DB °C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 KW
0 5 10 15 20 25 30 (MBH)
Total & Sensible Capacity

MWM020GW



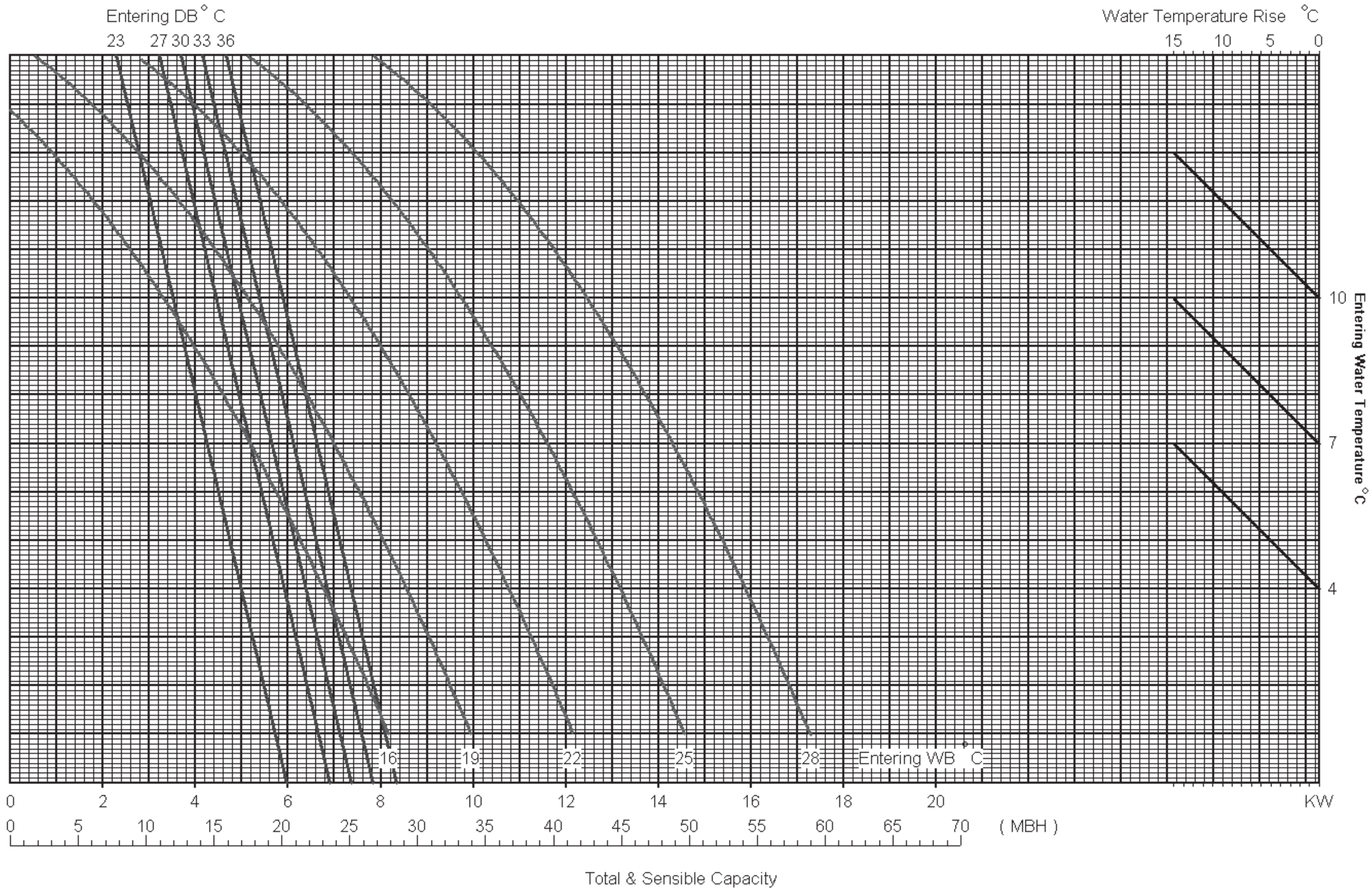
Entering DB °C
23 27 30 3336
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8
KW
0 5 10 15 20 25 30 (MBH)
Total & Sensible Capacity

MWM025GW



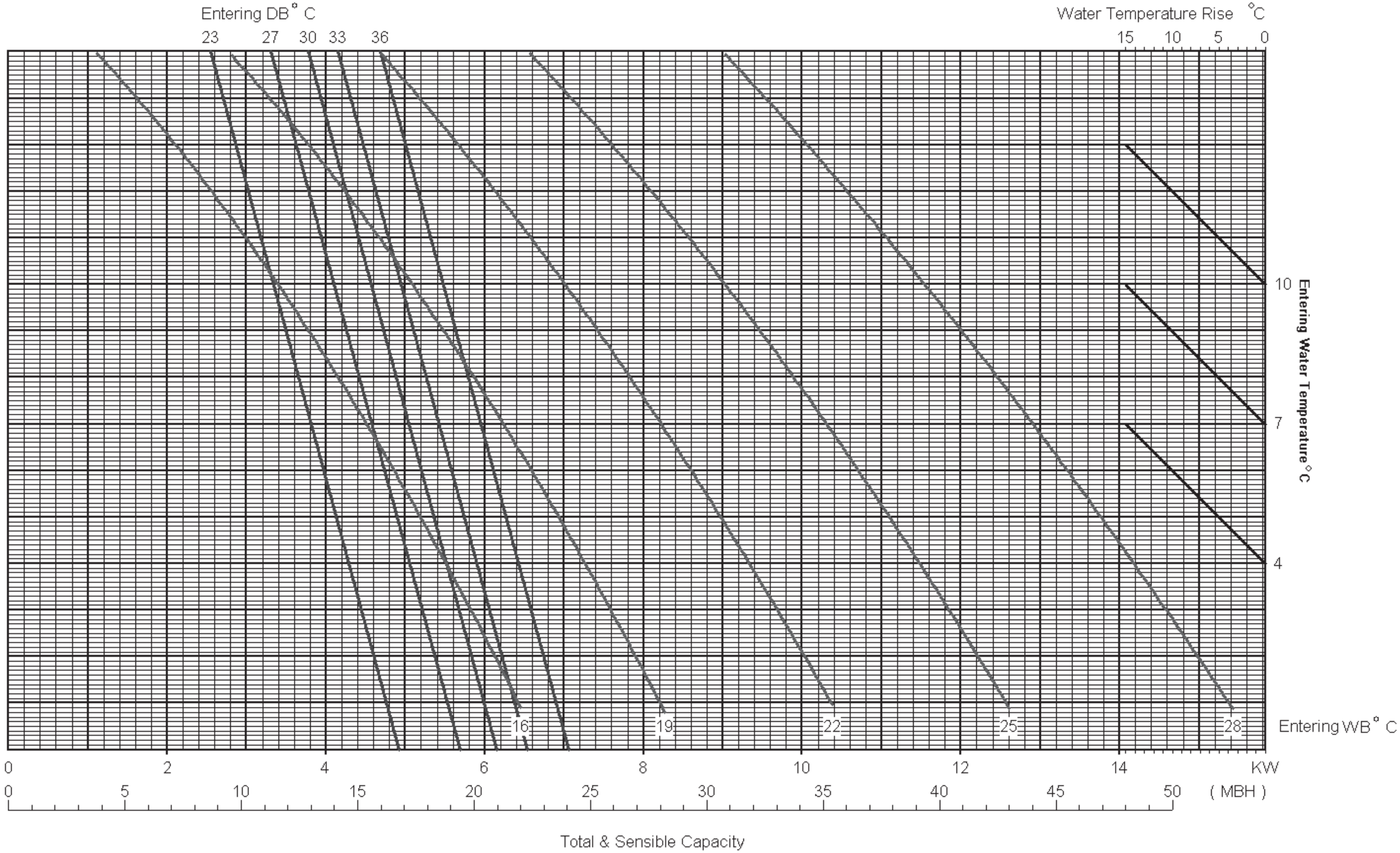
Entering DB °C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8
KW
0 5 10 15 20 25 30 (MBH)
Total & Sensible Capacity

MWM301W

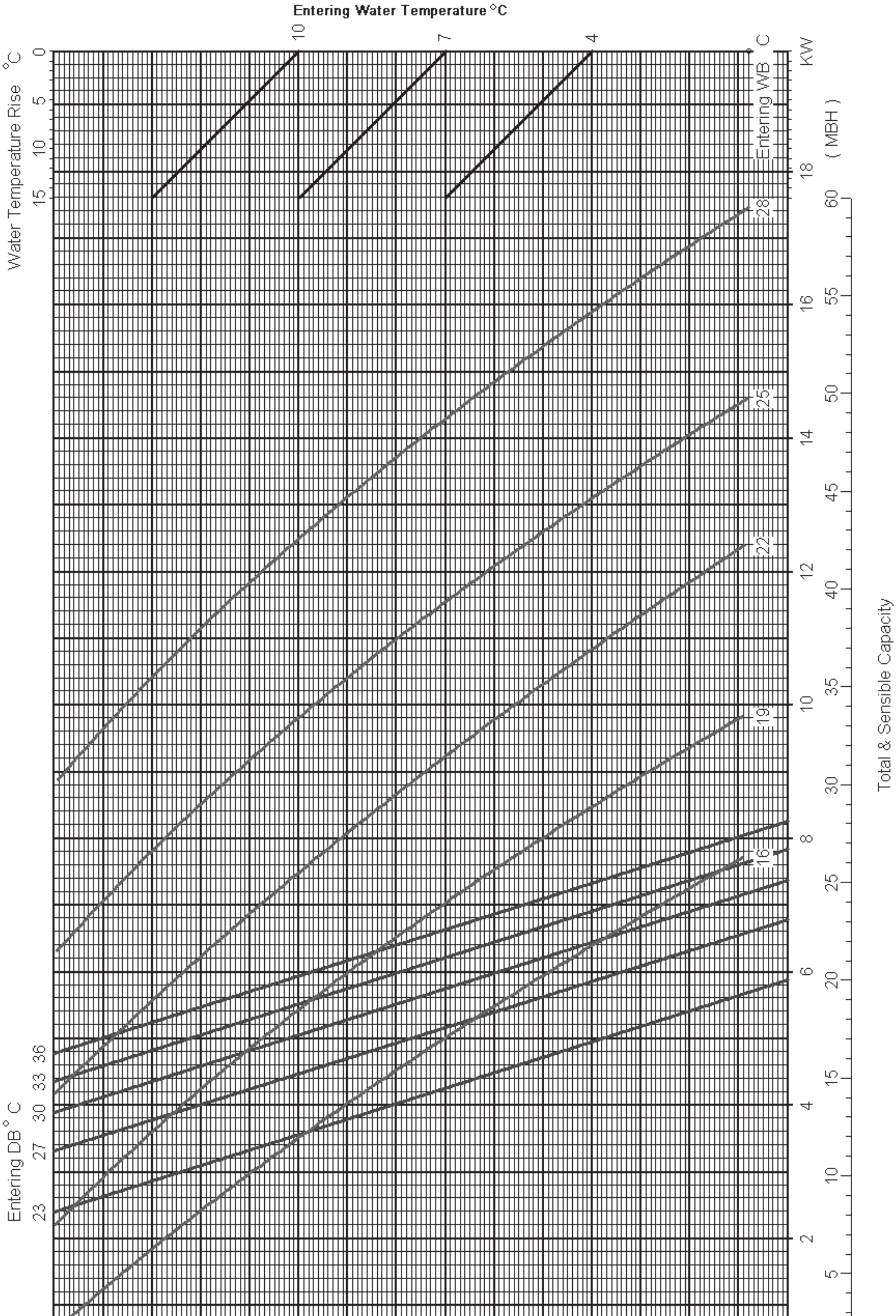


Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20
KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70
(MBH)
Total & Sensible Capacity

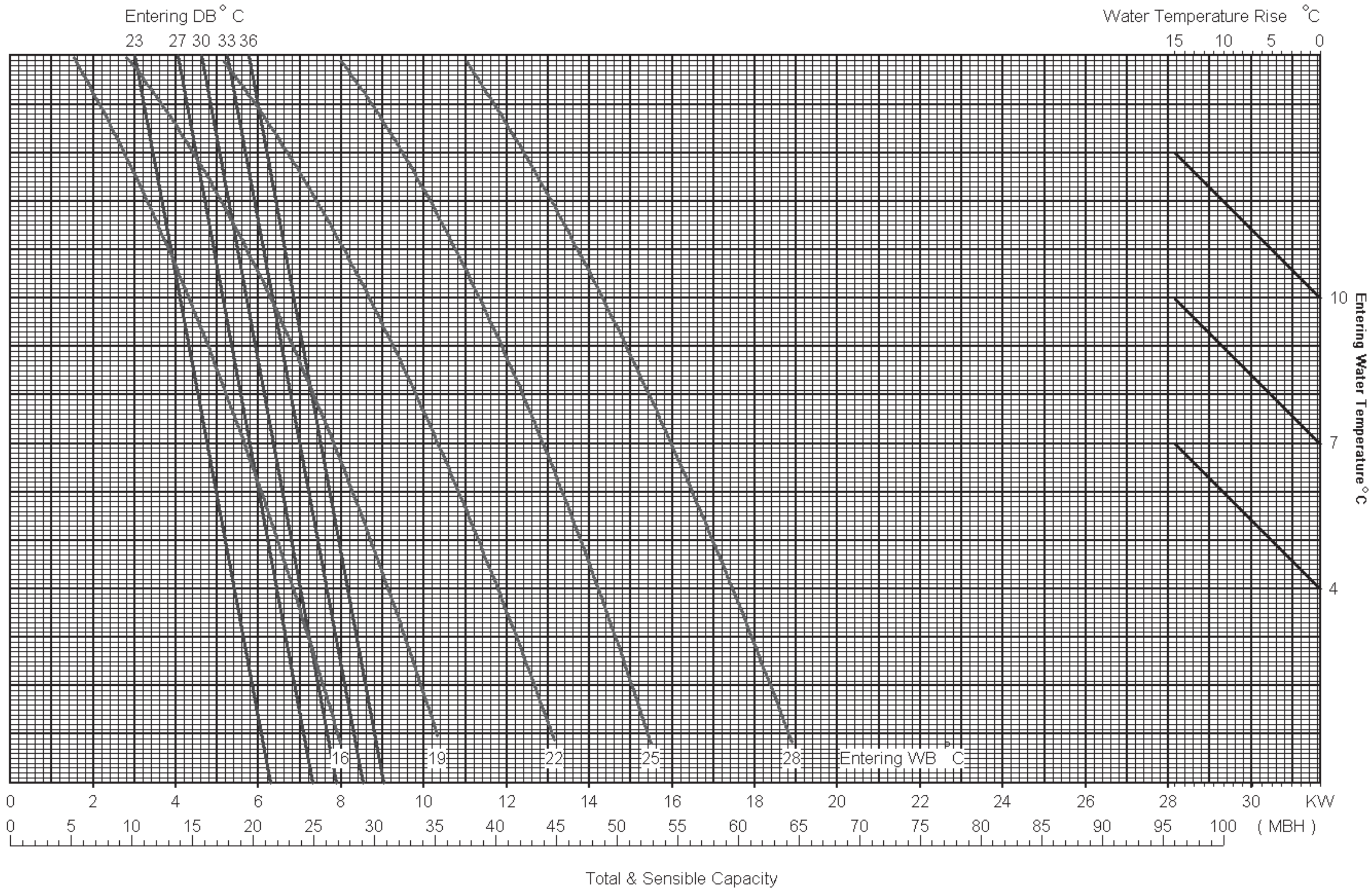
MCM020DW


Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
10
7
4
Entering Water Temperature °C
16
19
22
25
28
Entering WB° C
0
2
4
6
8
10
12
14
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

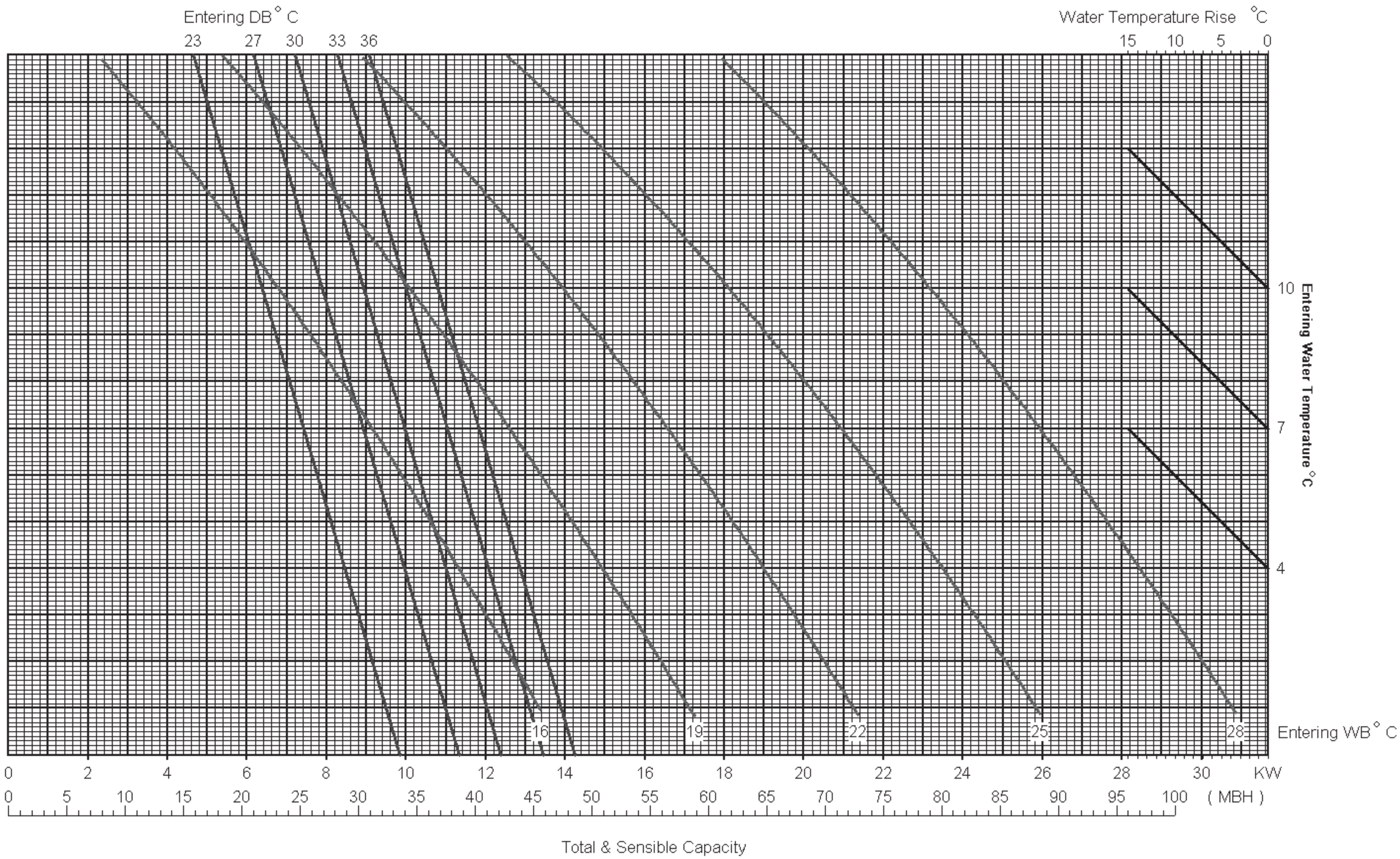
MCM025DW


Entering Water Temperature °C
10
7
4
Water Temperature Rise °C
0
5
10
15
Entering WB °C
28
25
22
19
16
Entering DB °C
23
27
30
33
36
KW
2
4
6
8
10
12
14
16
18
(MBH)
0
5
10
15
20
25
30
35
40
45
50
55
60
Total & Sensible Capacity

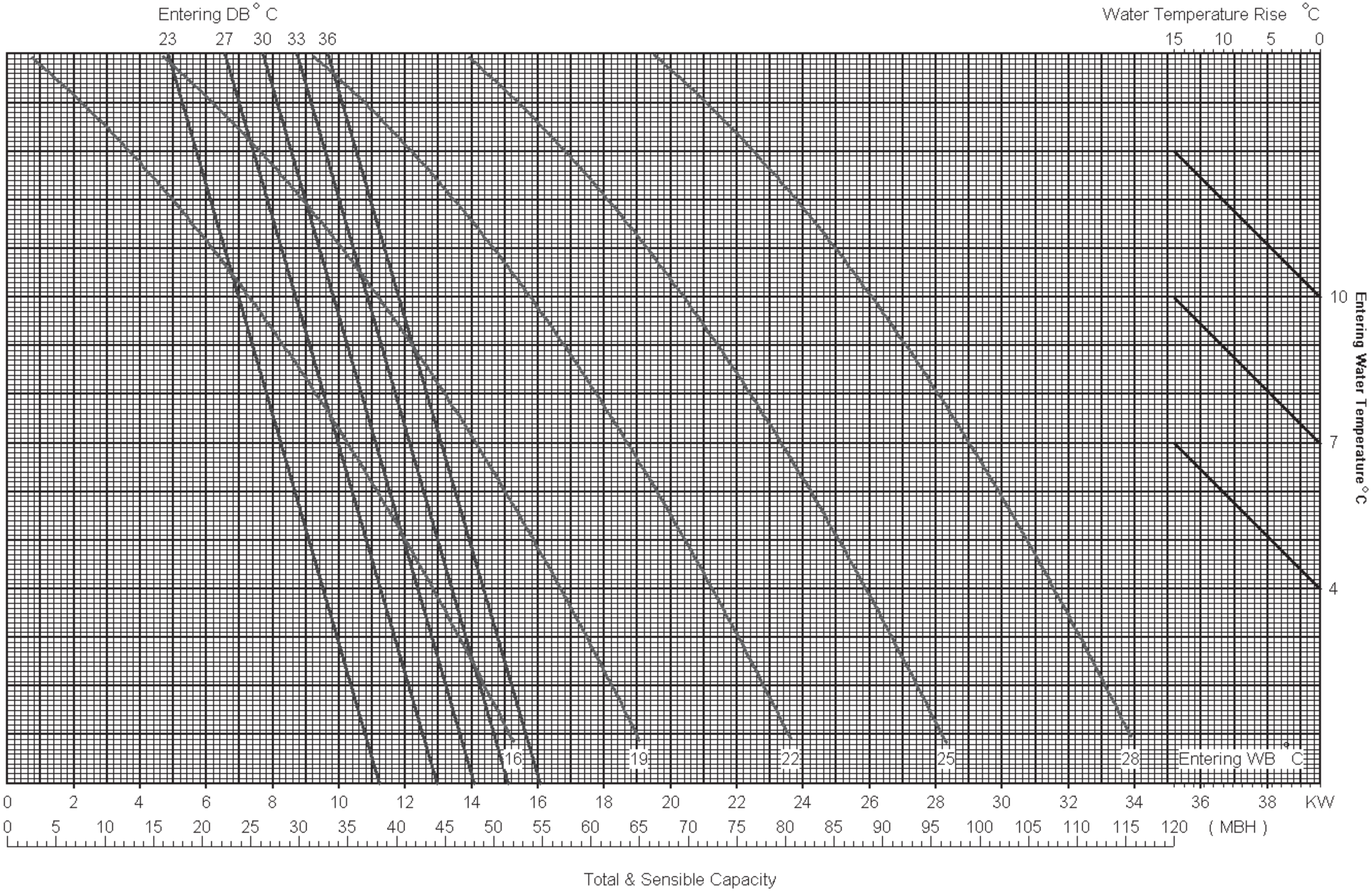
MCM030DW


Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCM040DW

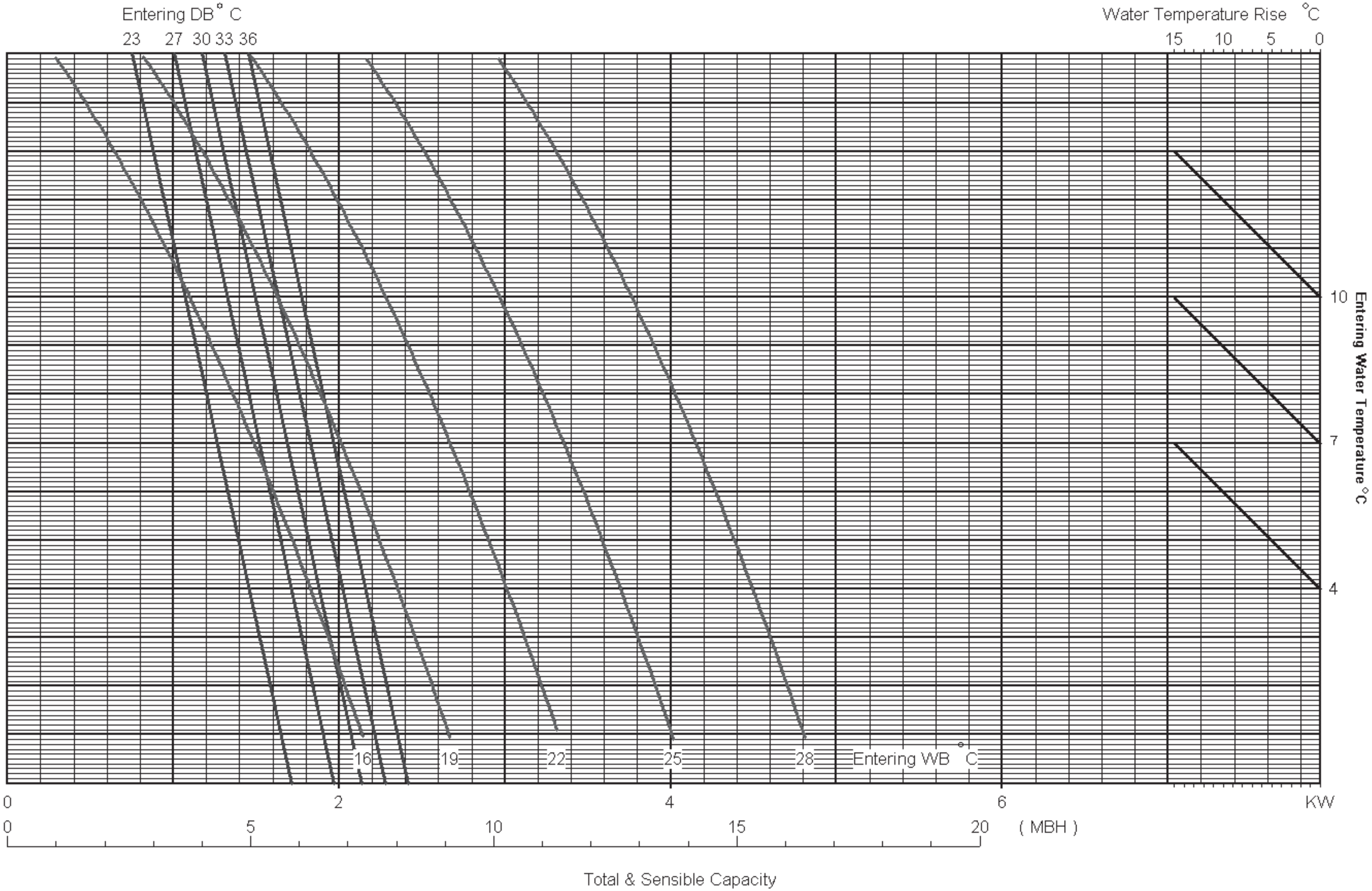

Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
Entering WB° C
16 19 22 25 28
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCM050DW

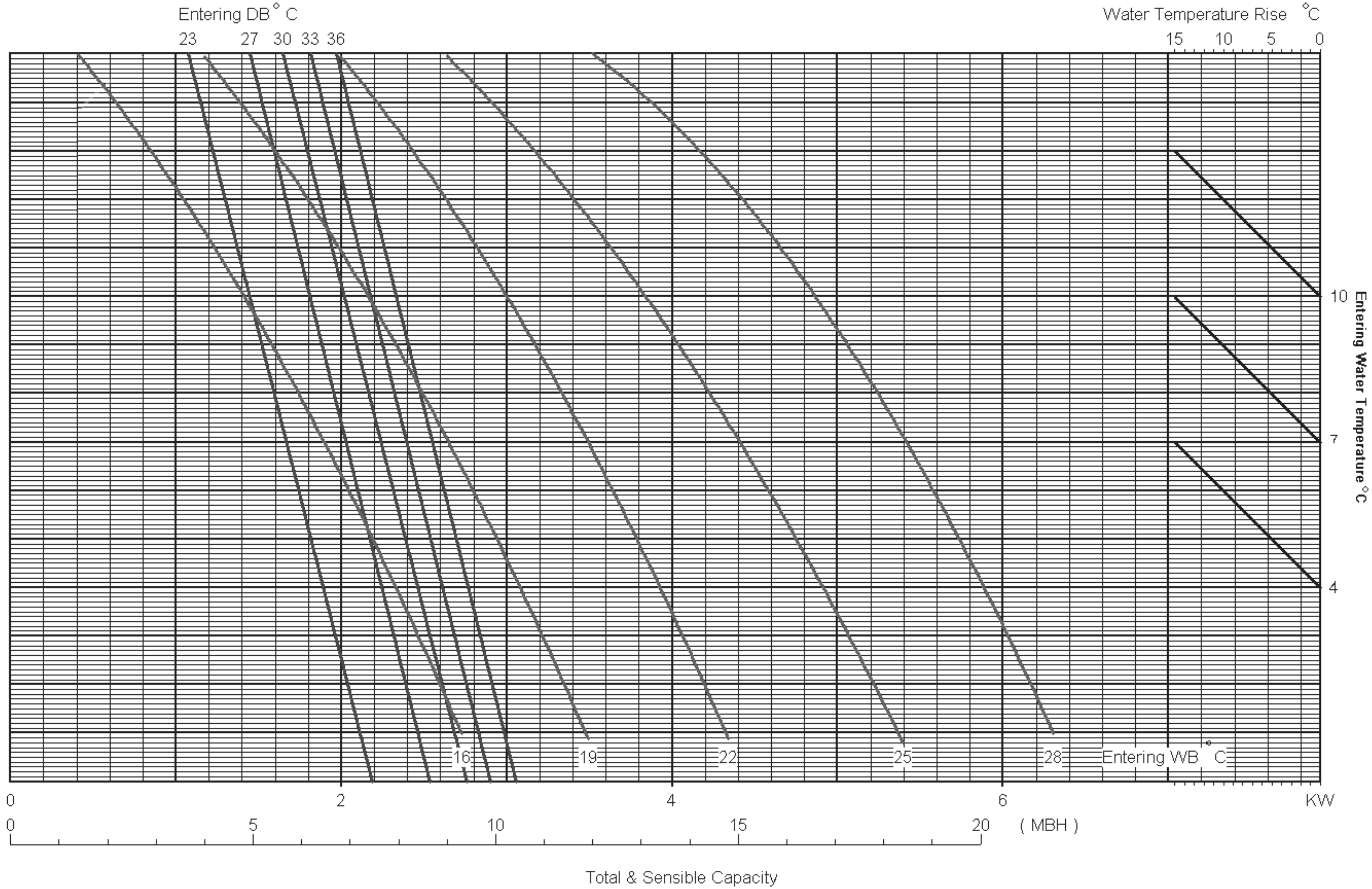


Entering DB °C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10 7 4
16 19 22 25 28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 (MBH)
Total & Sensible Capacity

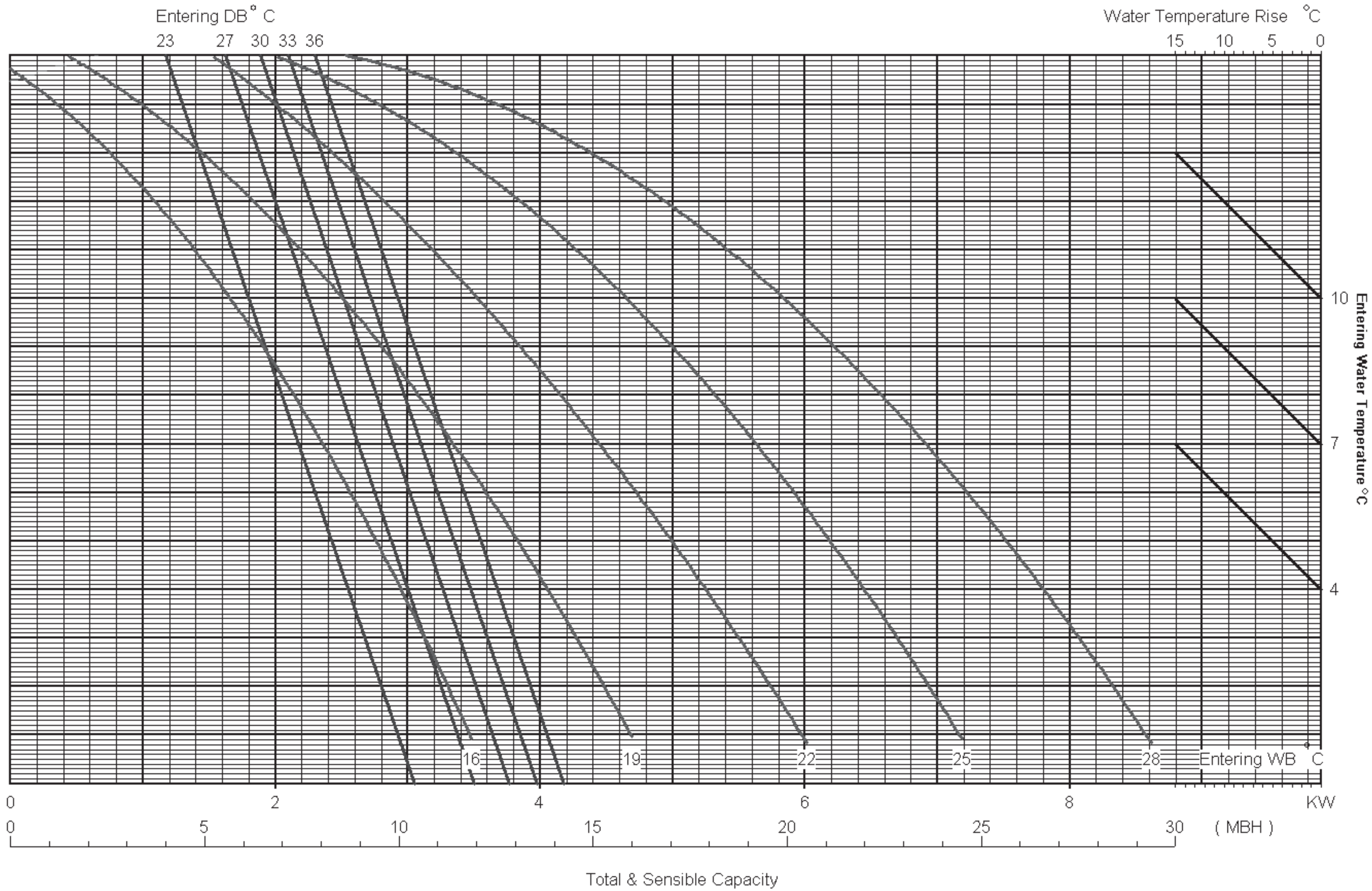
MCM007CBW


Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 KW
0 5 10 15 20 (MBH)
Total & Sensible Capacity

MCM010CBW

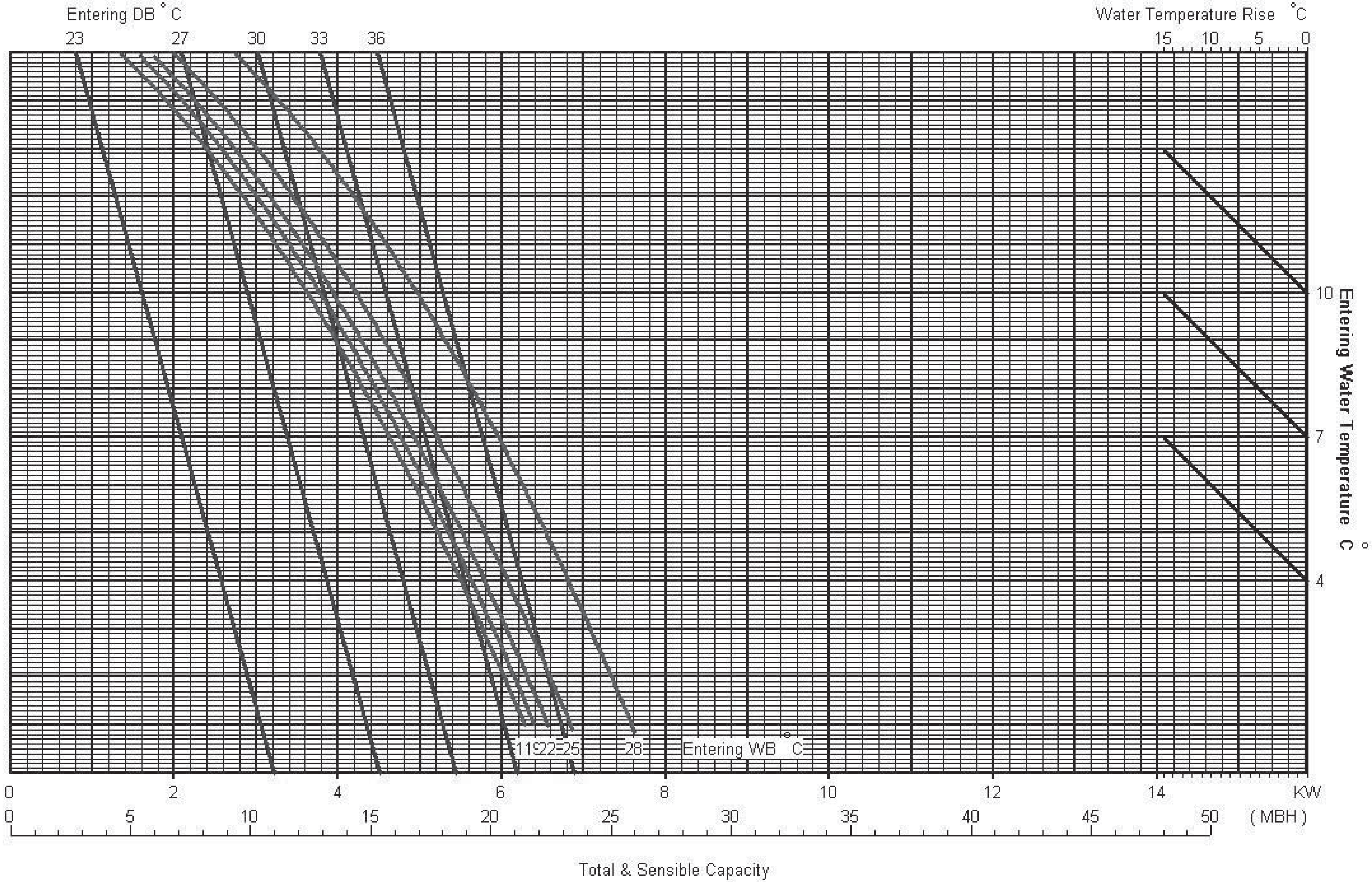

Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 KW
0 5 10 15 20 (MBH)
Total & Sensible Capacity

MCM015CBW



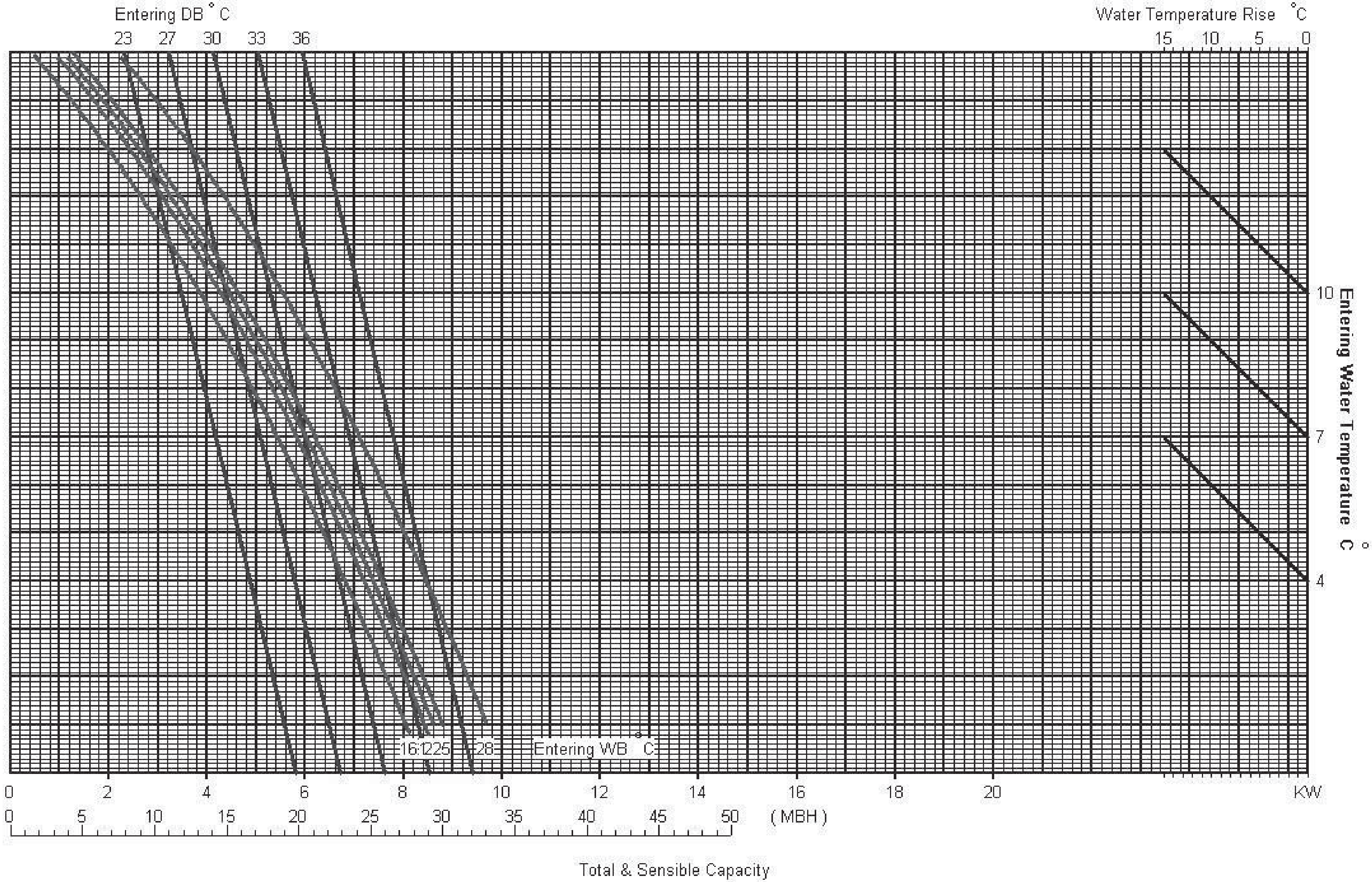
Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0
2
4
6
8
KW
0
5
10
15
20
25
30
(MBH)
Total & Sensible Capacity

MCM015EW

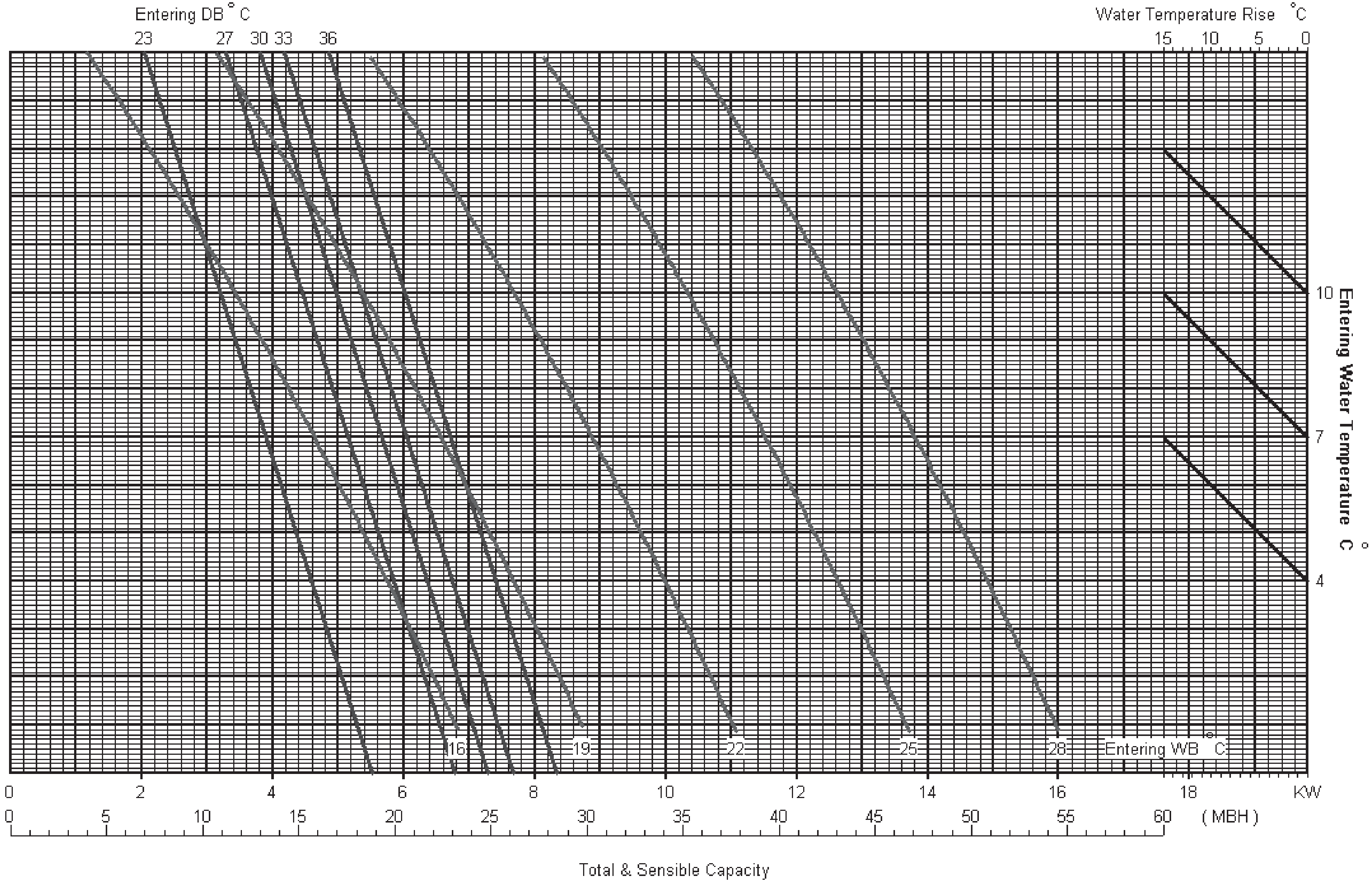


Entering DB °C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
19 22 25
28
Entering WB °C
0
2
4
6
8
10
12
14
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

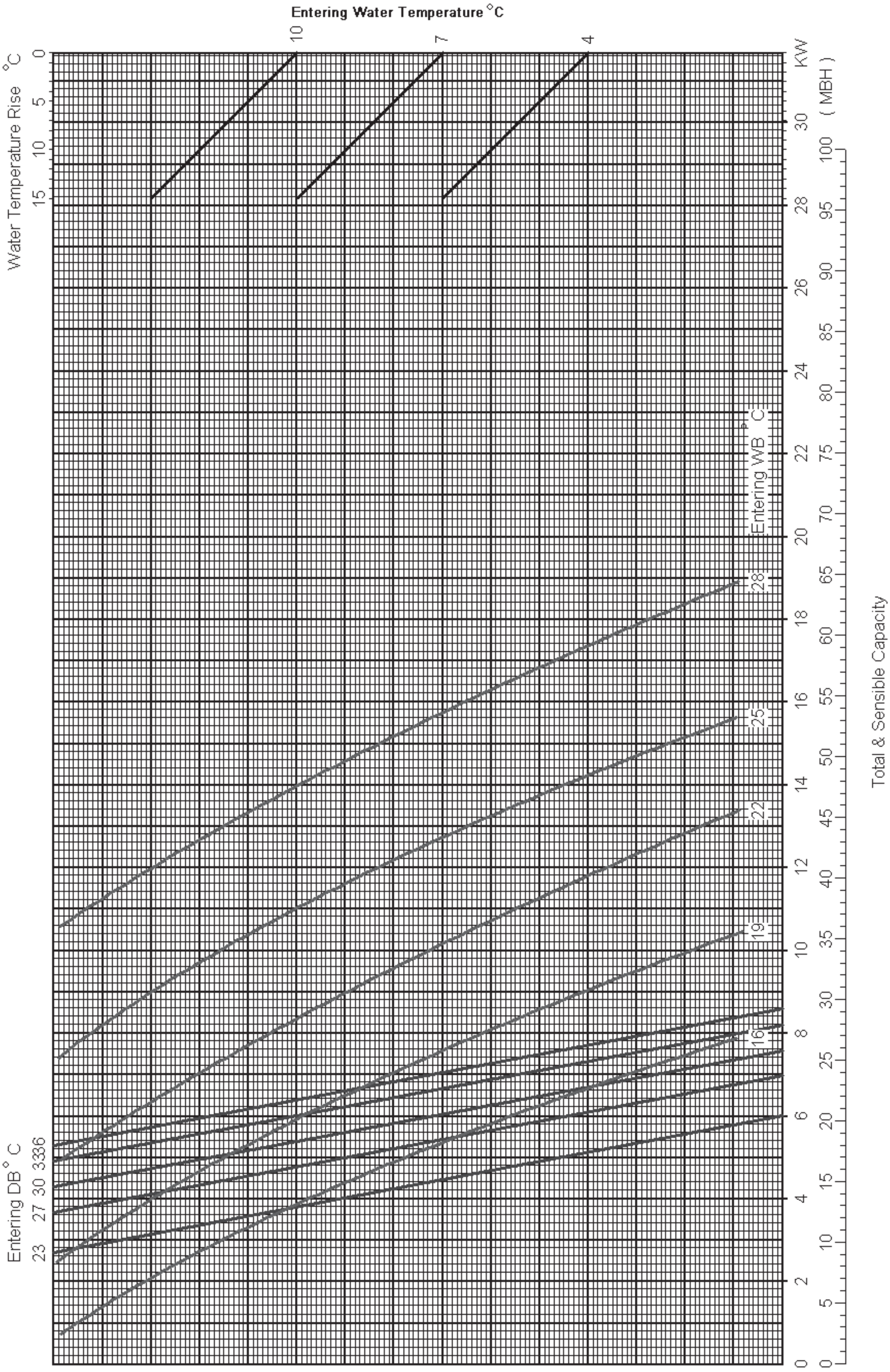
MCM020EW


Entering DB °C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
12
25
28
Entering WB °C
0
2
4
6
8
10
12
14
16
18
20
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

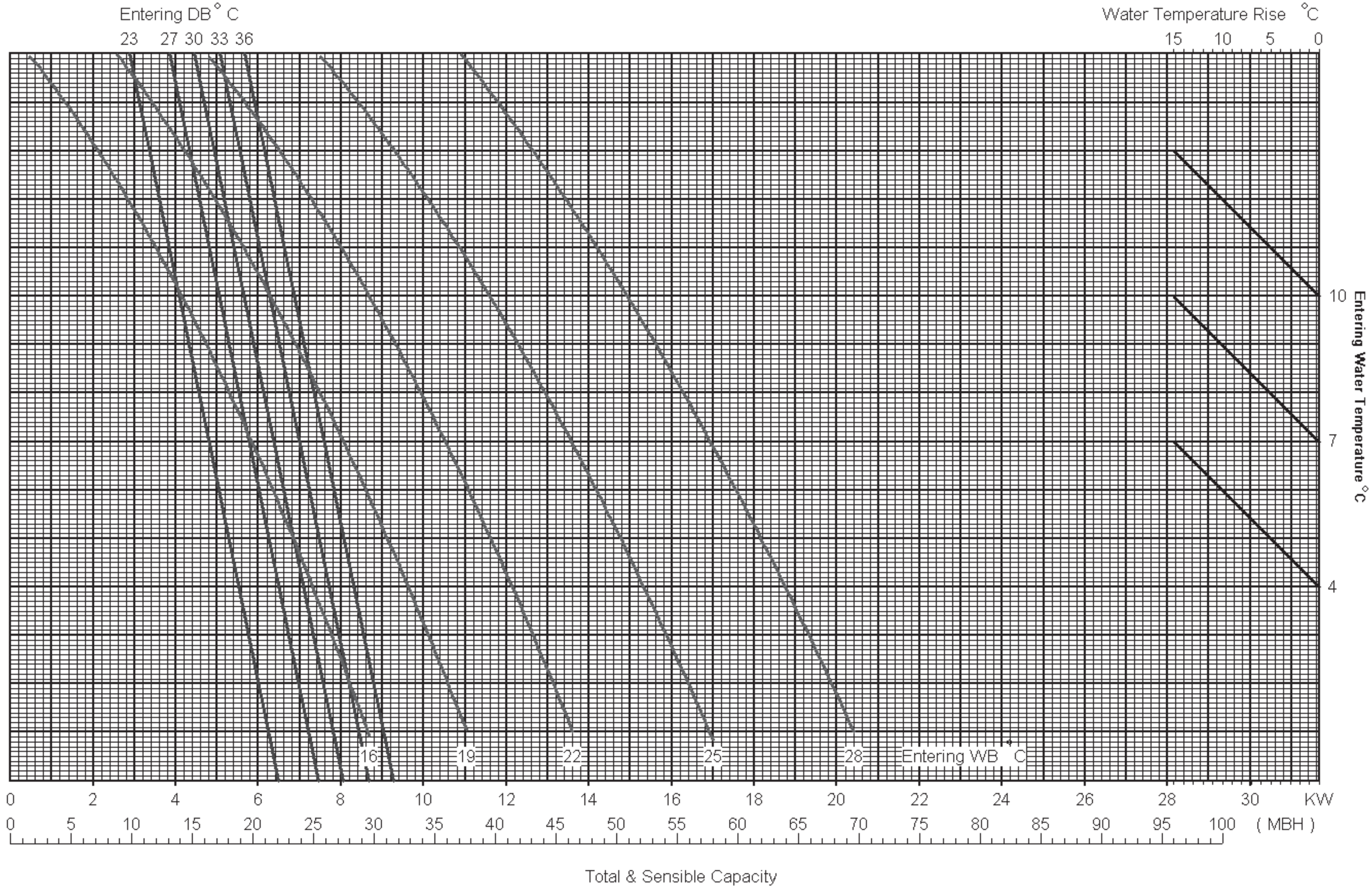
MCM025EW


Entering DB °C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0
2
4
6
8
10
12
14
16
18
KW
0
5
10
15
20
25
30
35
40
45
50
55
60
(MBH)
Total & Sensible Capacity

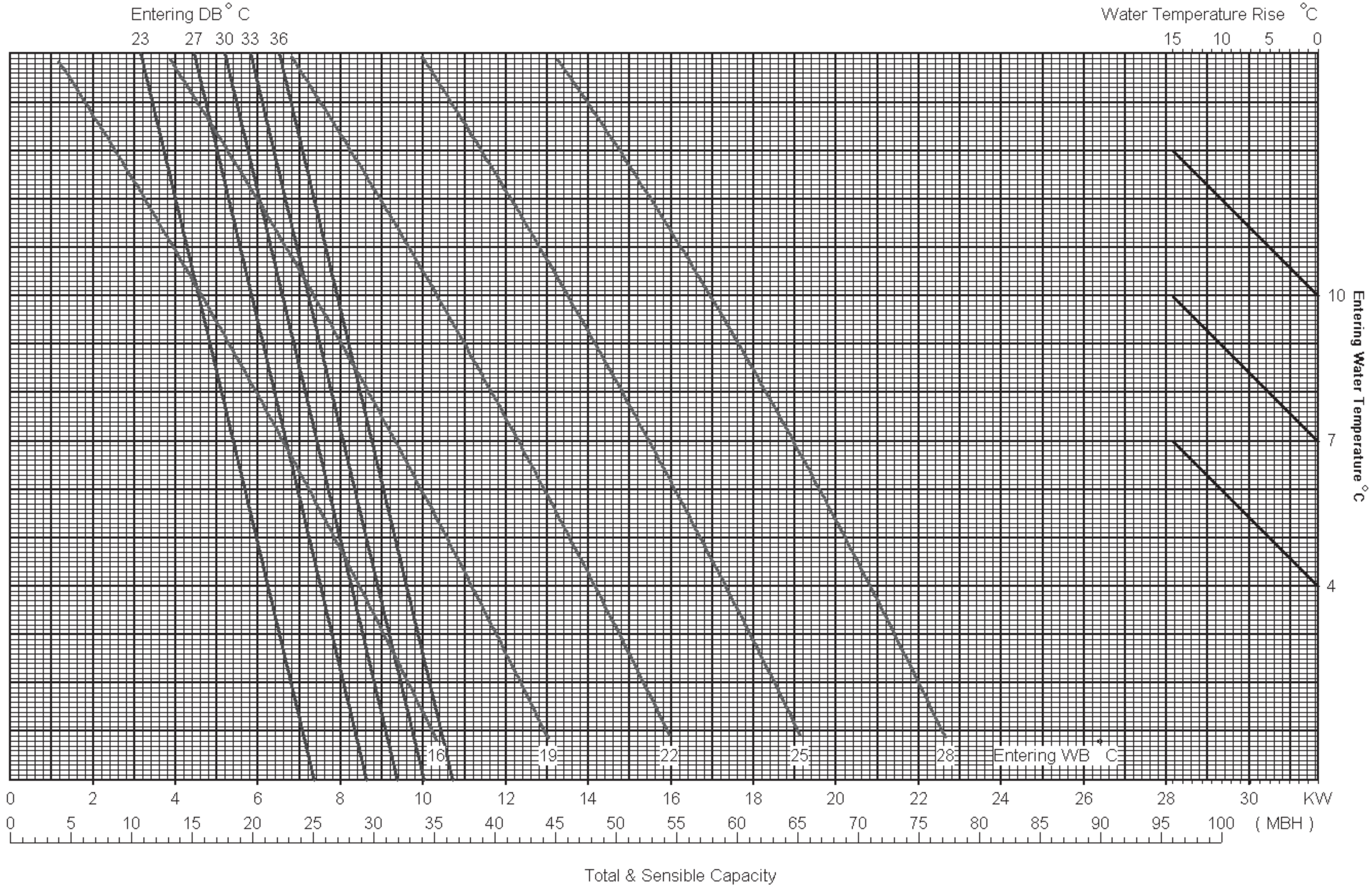
MCK020AW


Entering Water Temperature °C
10
7
4
Water Temperature Rise °C
0
5
10
15
Entering DB° C
23 27 30 3336
Entering WB °C
16
19
22
25
28
KW
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30
(MBH)
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100
Total & Sensible Capacity

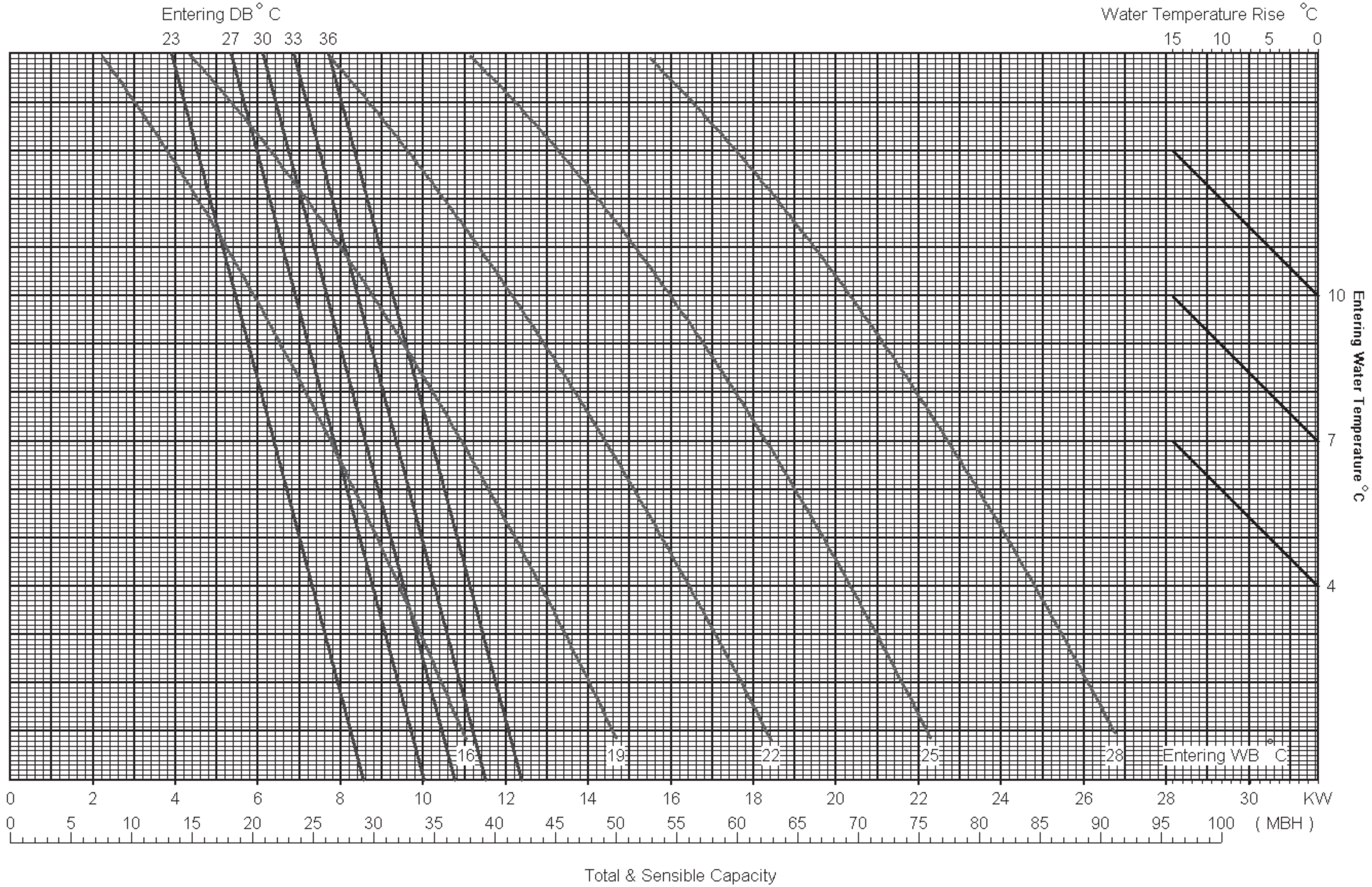
MCK025AW


Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

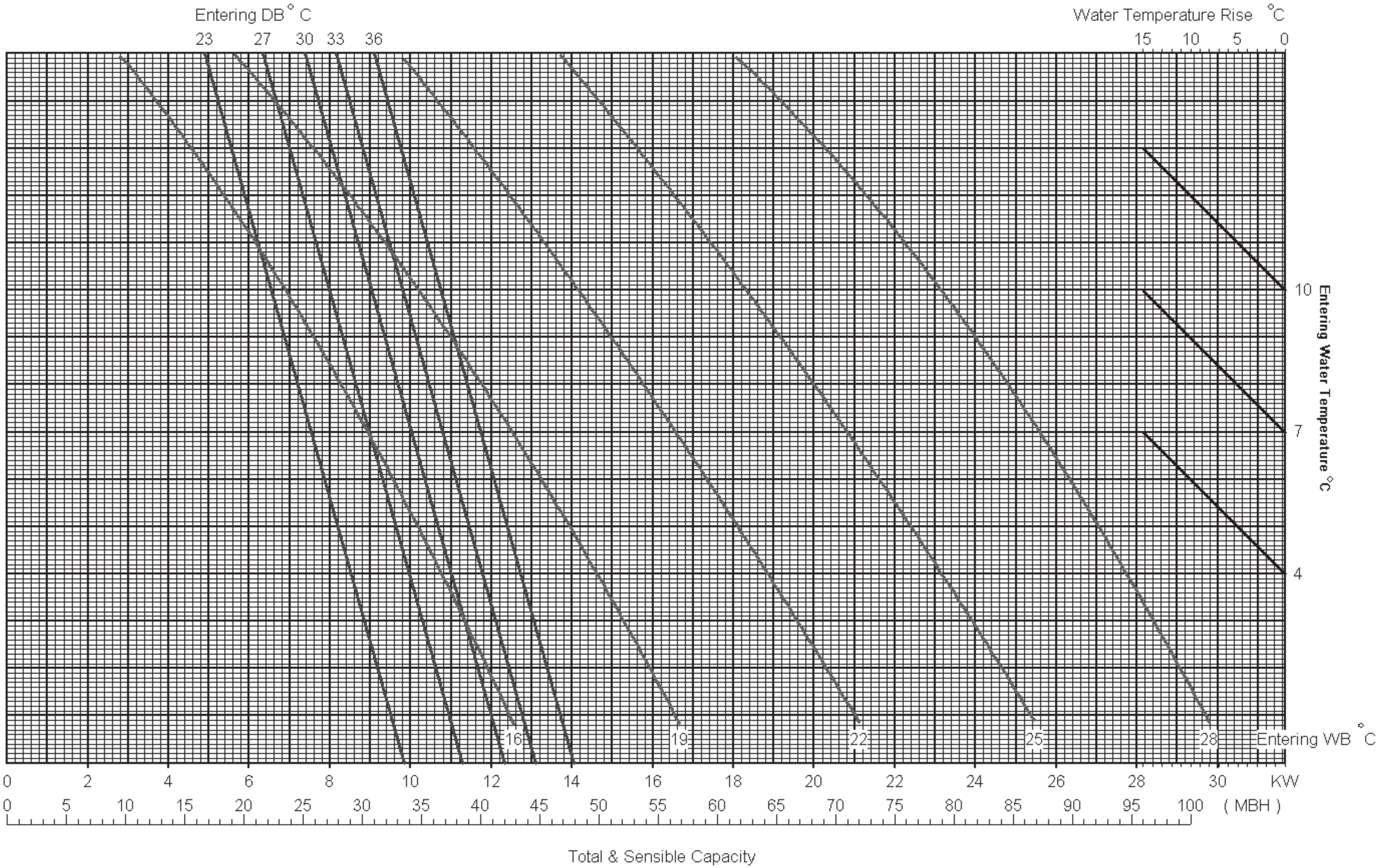
MCK030AW


Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCK040AW

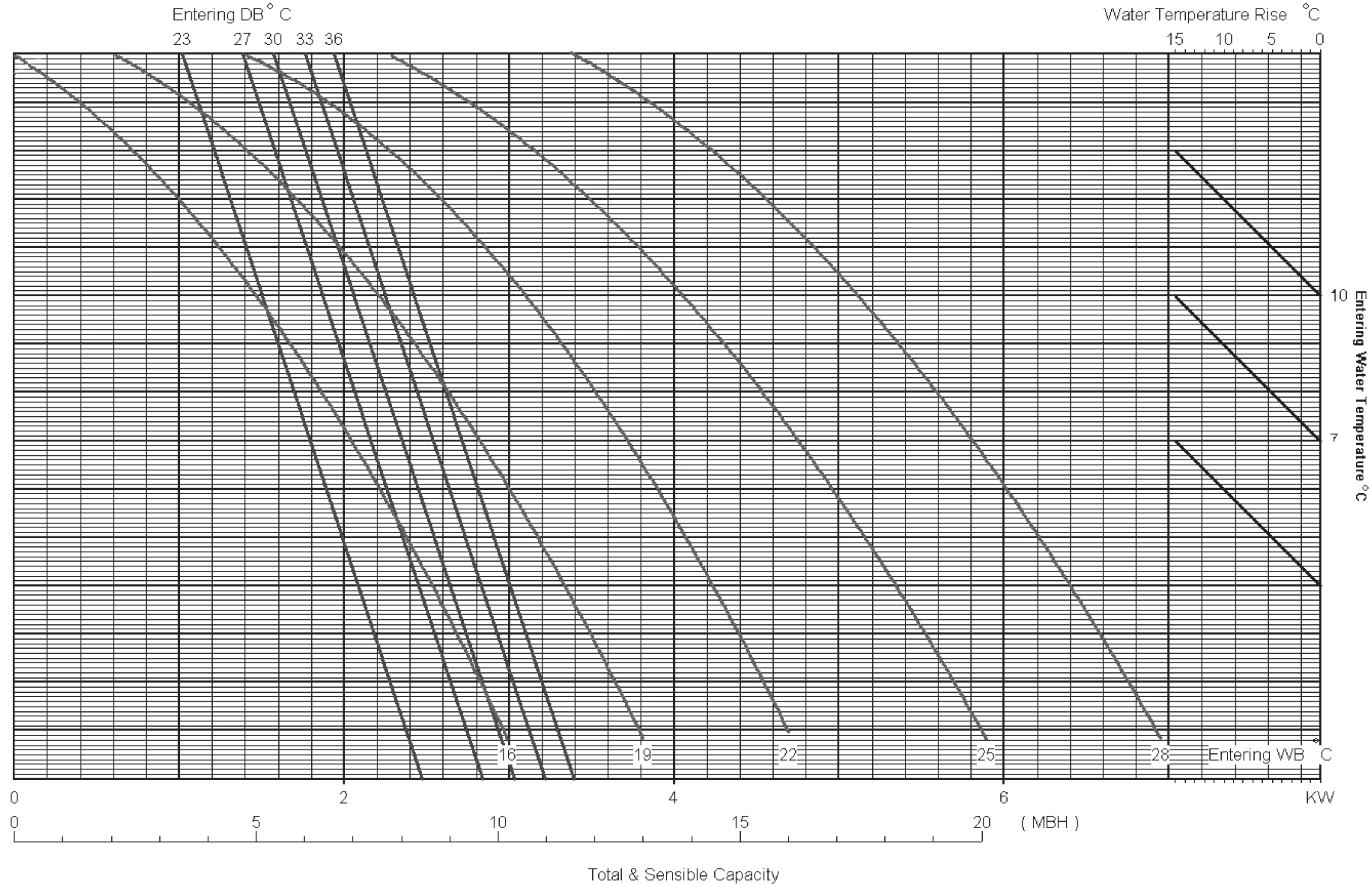

Entering DB °C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCK050AW



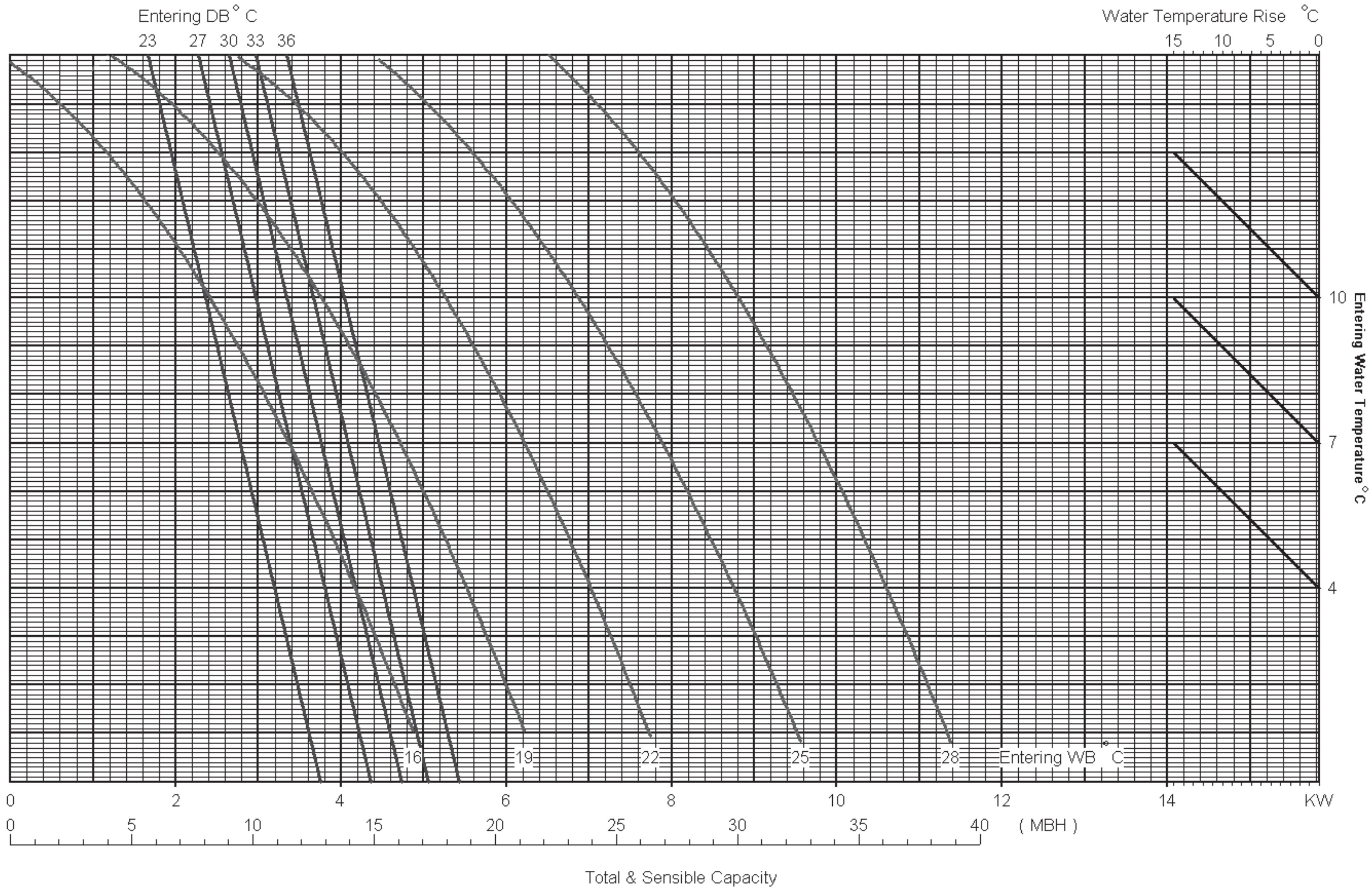
Entering DB ° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCK010CW



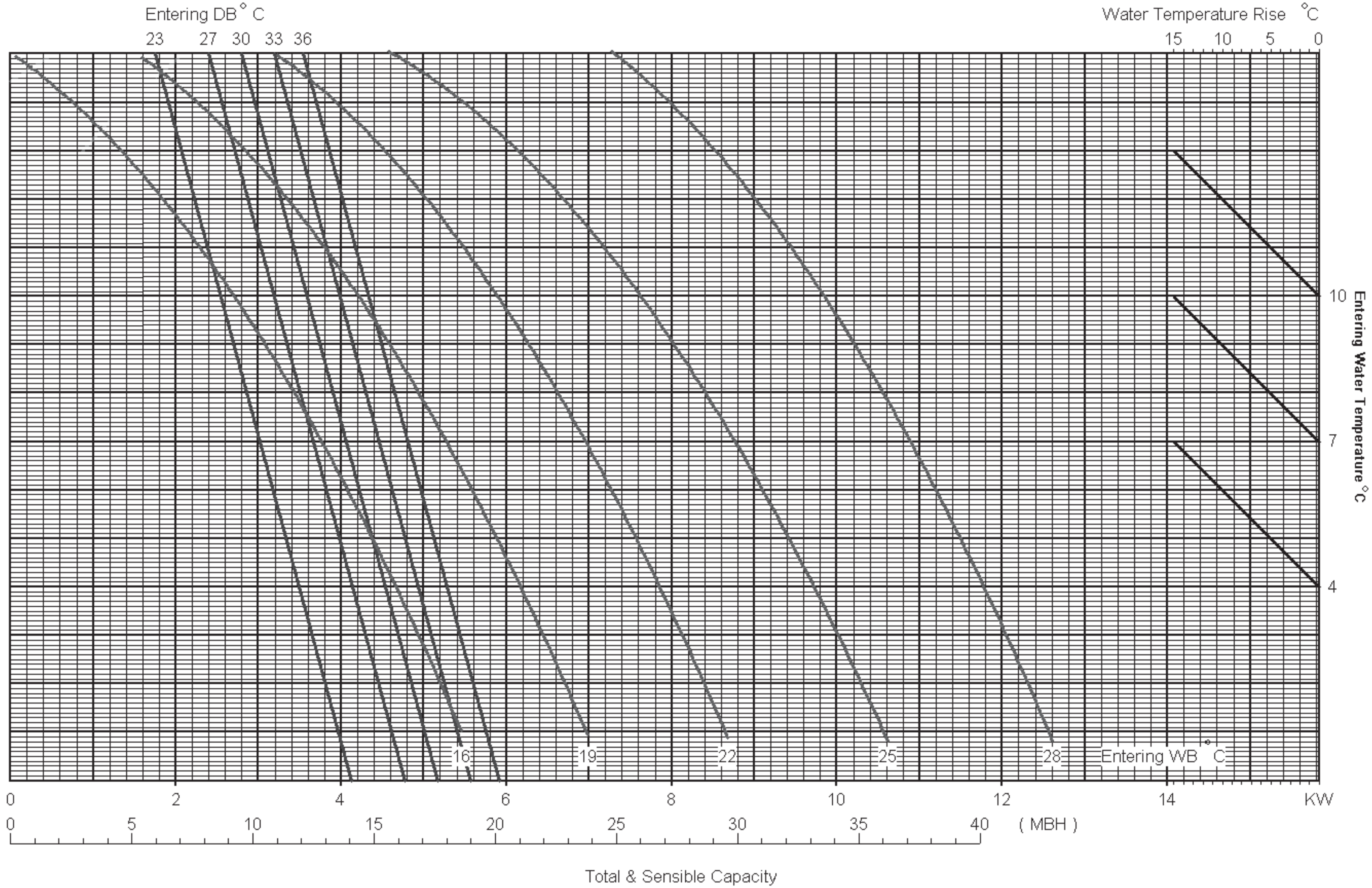
Entering DB °C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
16
19
22
25
28
Entering WB °C
0
2
4
6
KW
0
5
10
15
20
(MBH)
Total & Sensible Capacity

MCK015CW



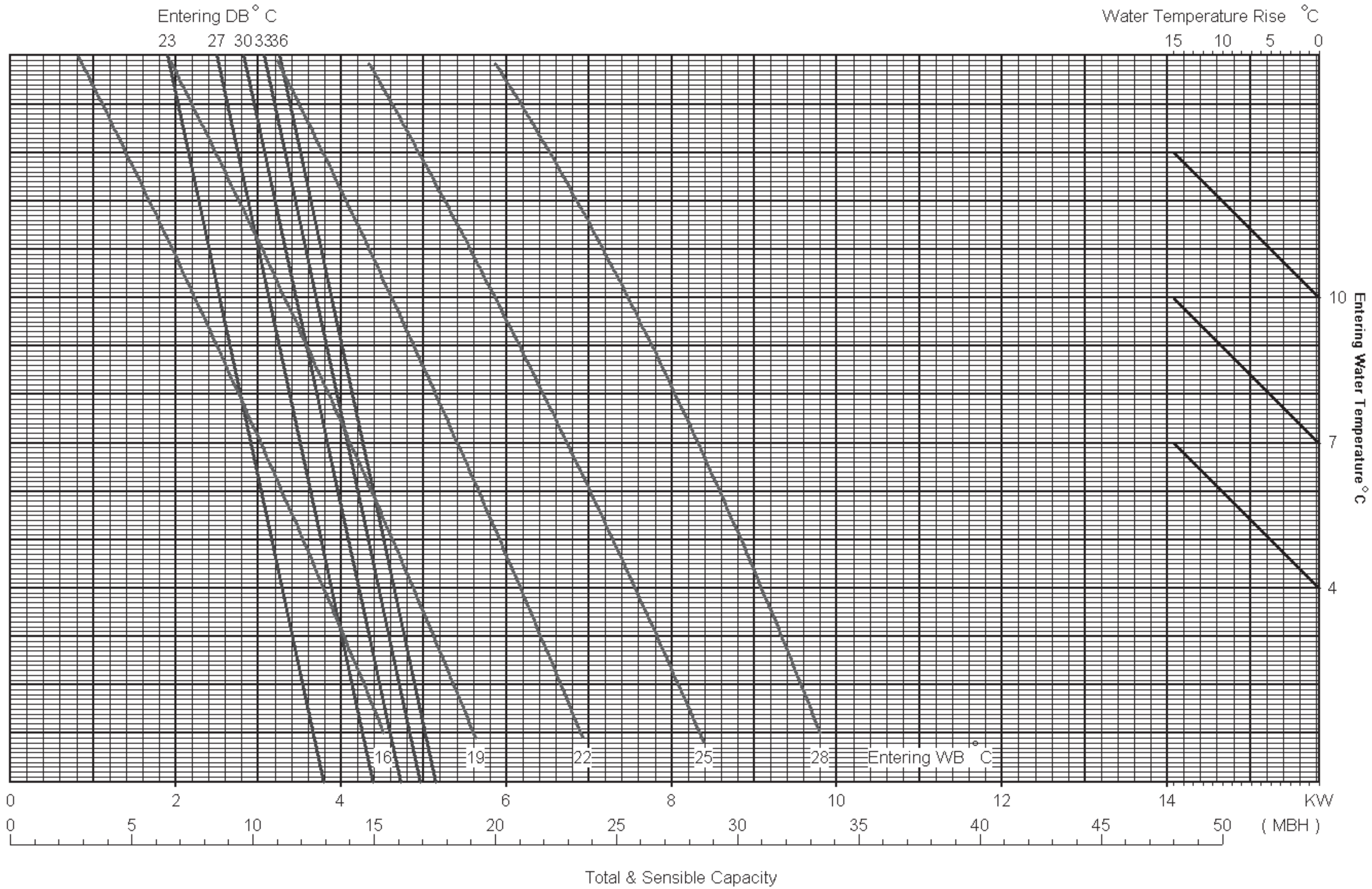
Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 KW
0 5 10 15 20 25 30 35 40 (MBH)
Total & Sensible Capacity

MCK020CW



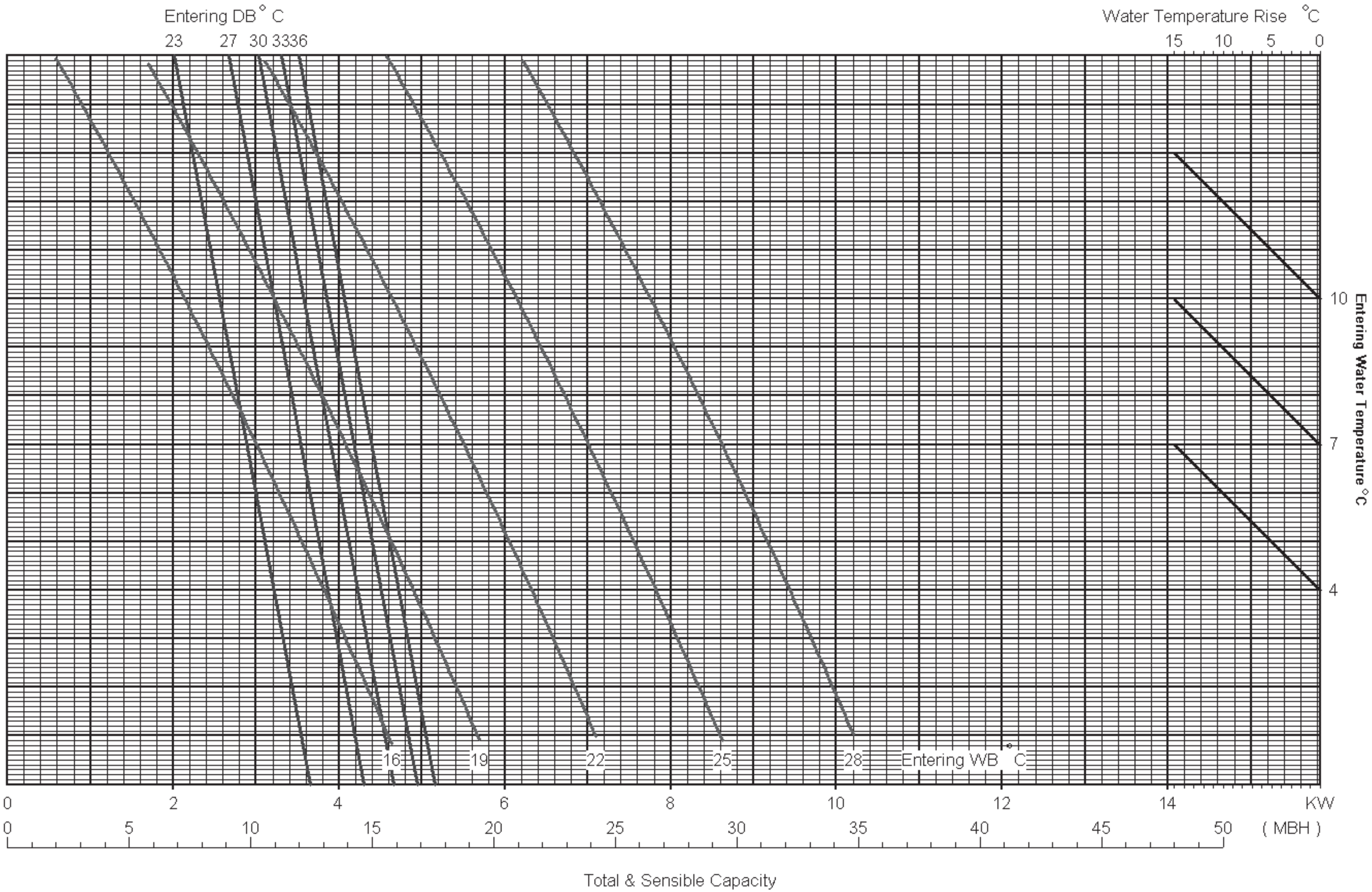
Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 KW
0 5 10 15 20 25 30 35 40 (MBH)
Total & Sensible Capacity

MCK020AWH



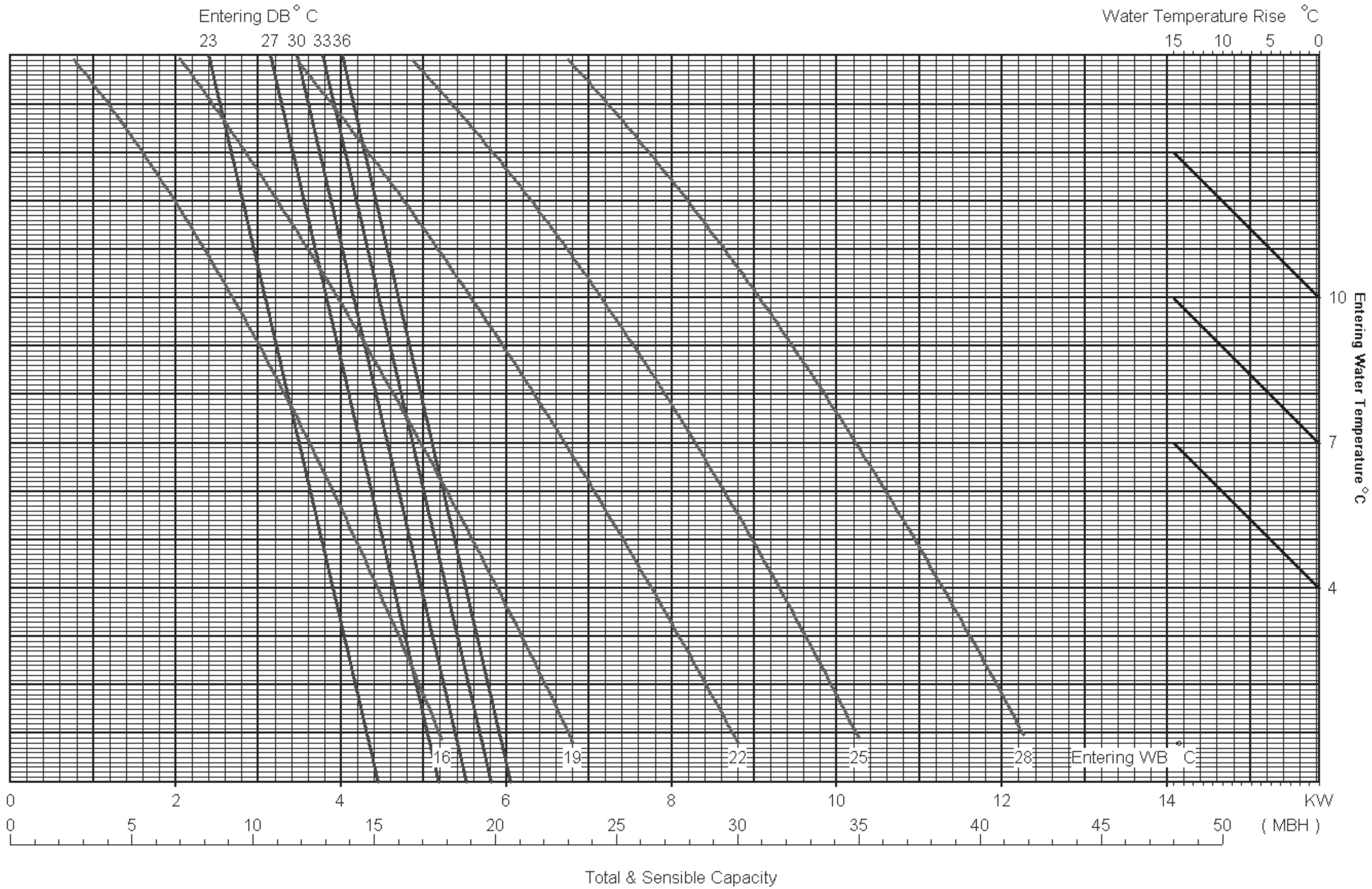
Entering DB °C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 8 10 12 14 KW
0 5 10 15 20 25 30 35 40 45 50 (MBH)
Total & Sensible Capacity

MCK025AWH



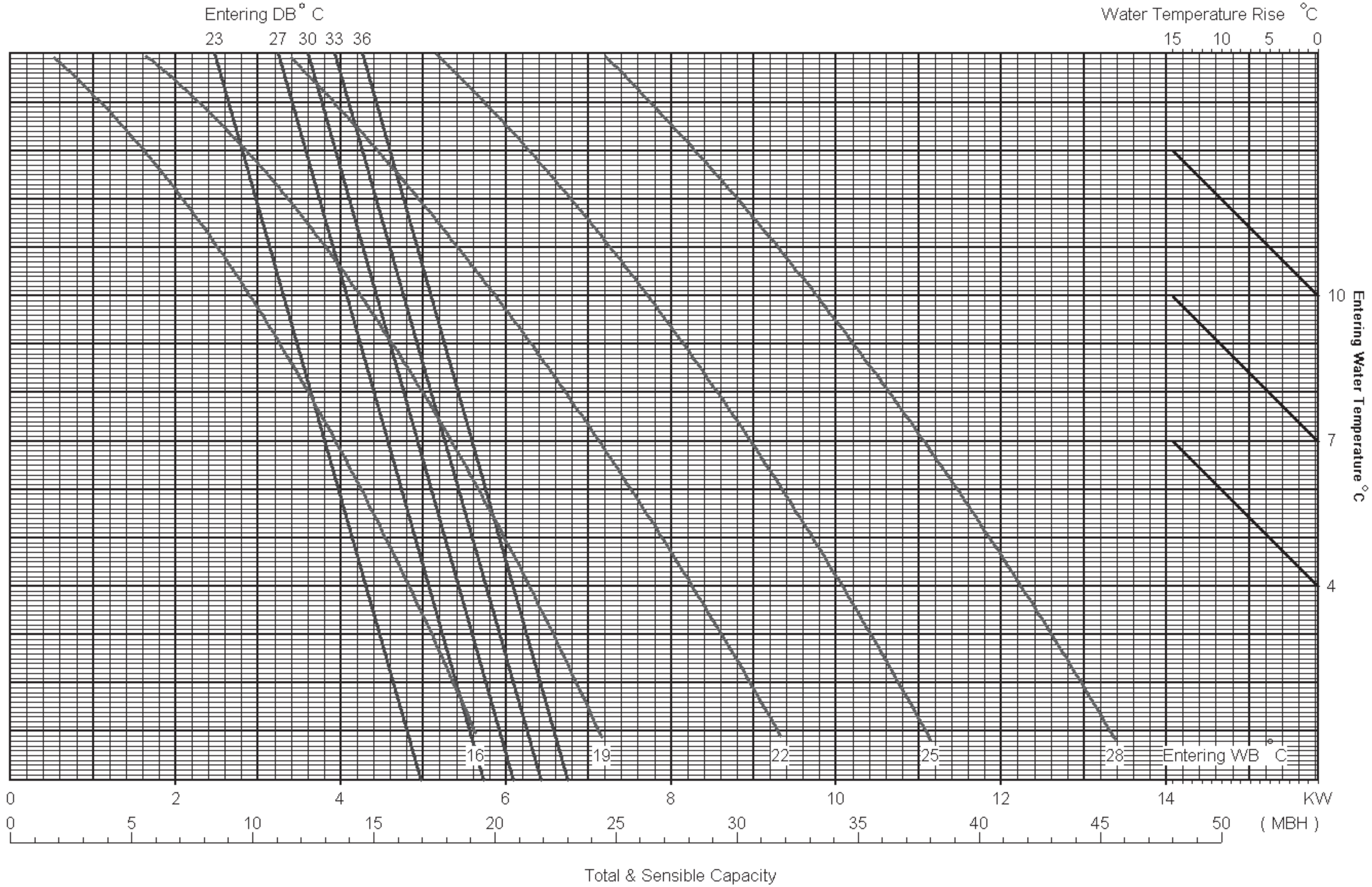
Entering DB °C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0
2
4
6
8
10
12
14
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

MCK030AWH



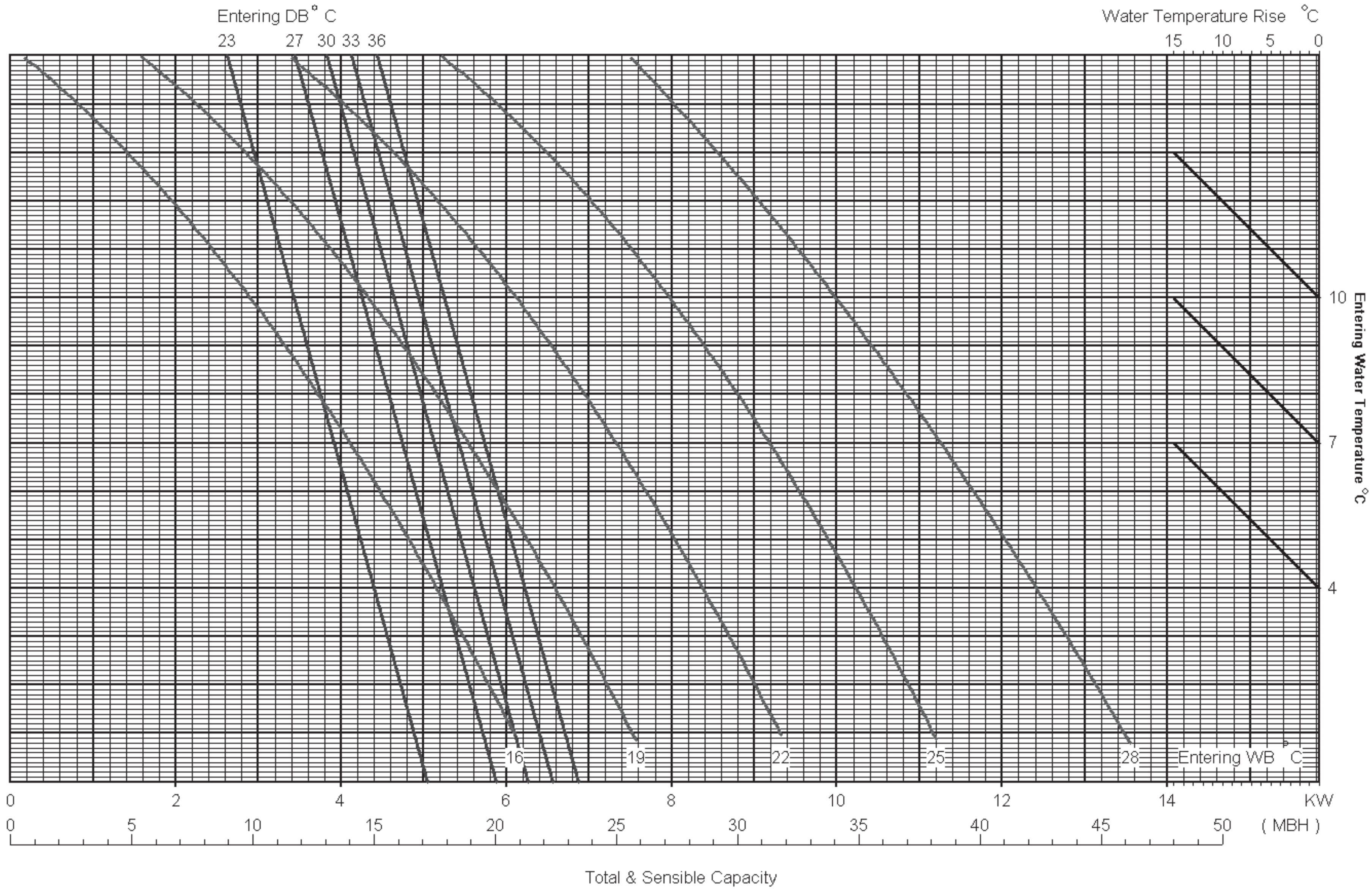
Entering DB ° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 8 10 12 14 KW
0 5 10 15 20 25 30 35 40 45 50 (MBH)
Total & Sensible Capacity

MCK040AWH

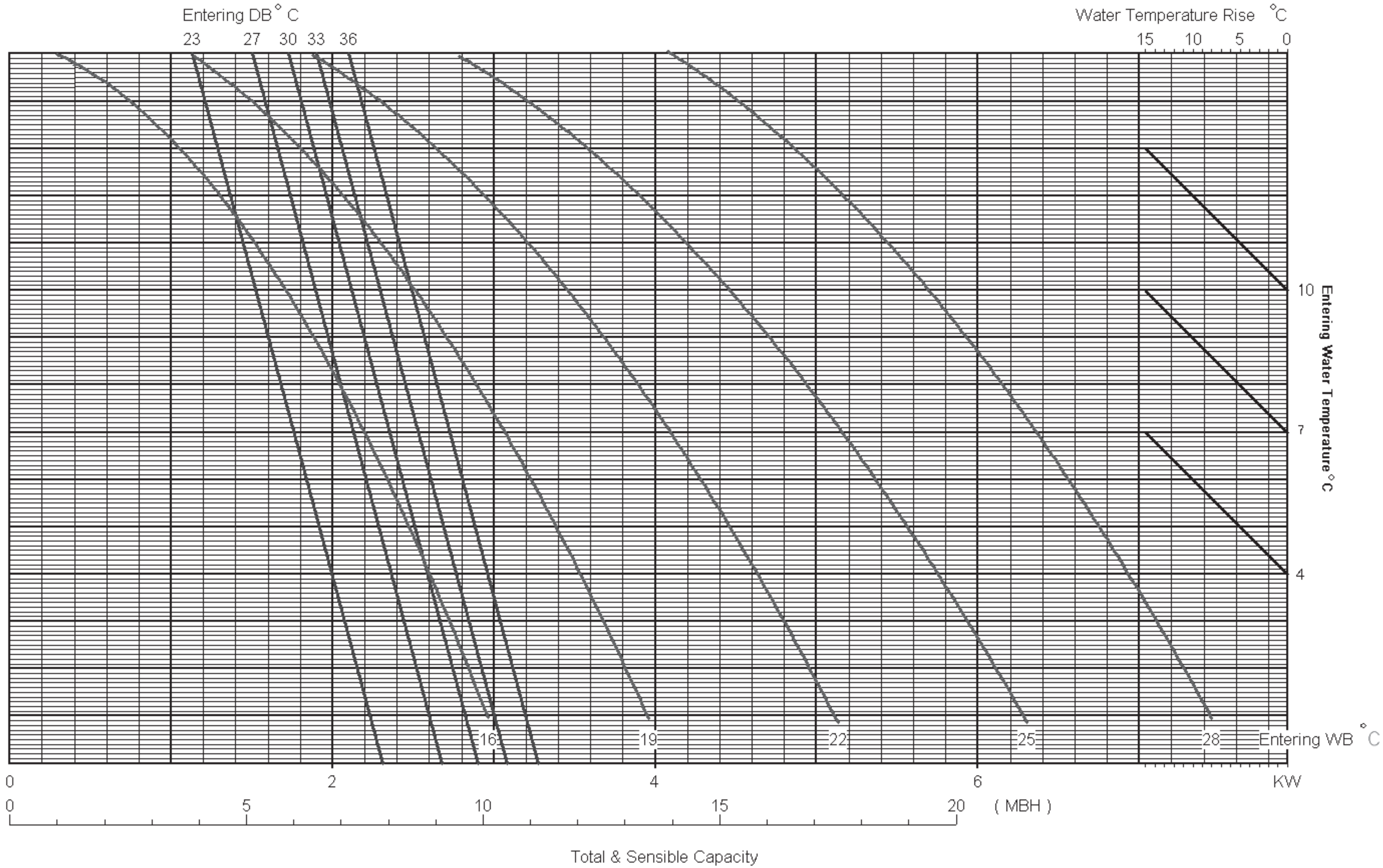


Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 KW
0 5 10 15 20 25 30 35 40 45 50 (MBH)
Total & Sensible Capacity

MCK050AWH

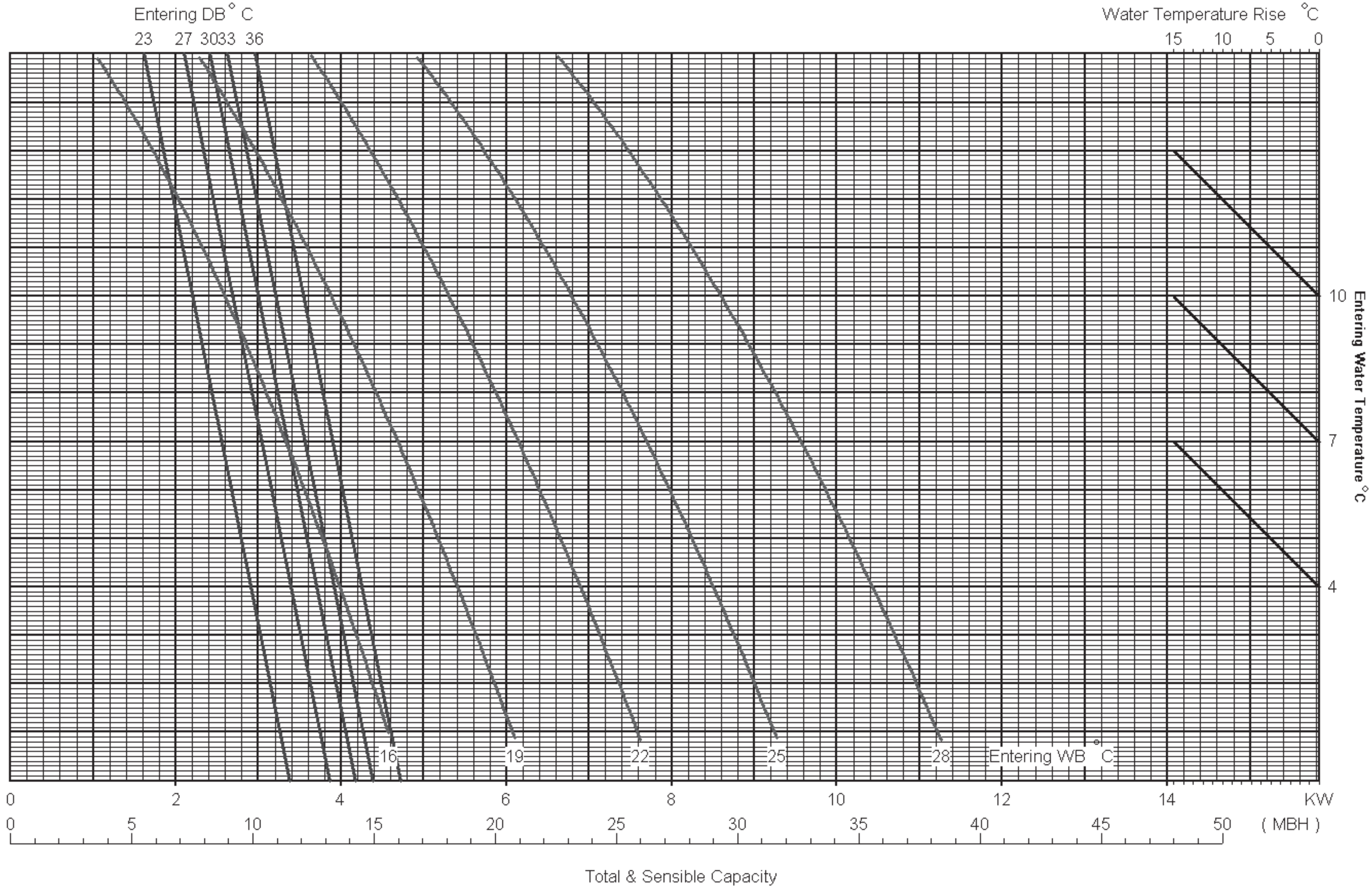

Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0
2
4
6
8
10
12
14
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

MCC010CW



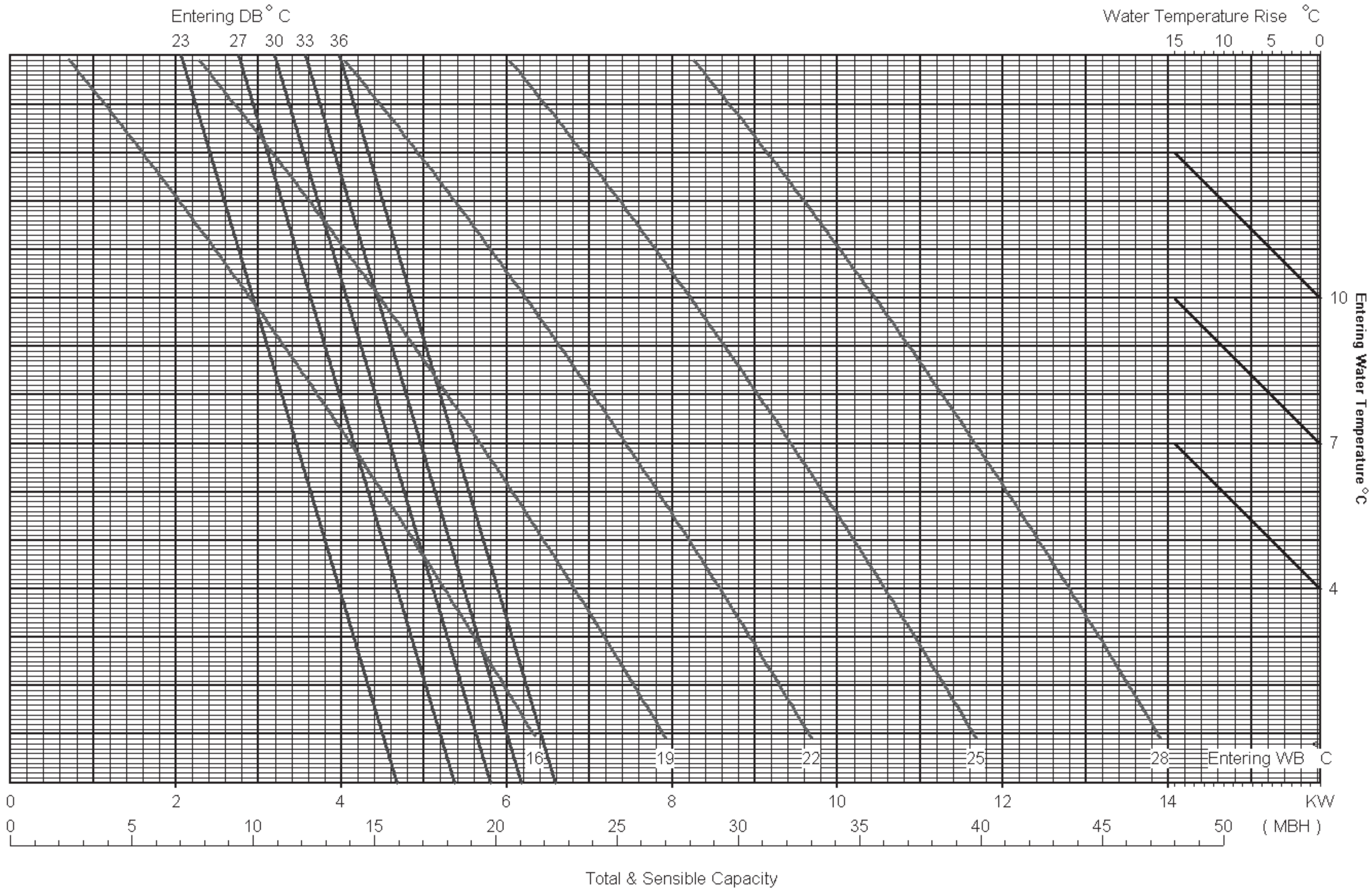
Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
Entering WB °C
16
19
22
25
28
0
2
4
6
KW
0
5
10
15
20
(MBH)
Total & Sensible Capacity

MCC015CW



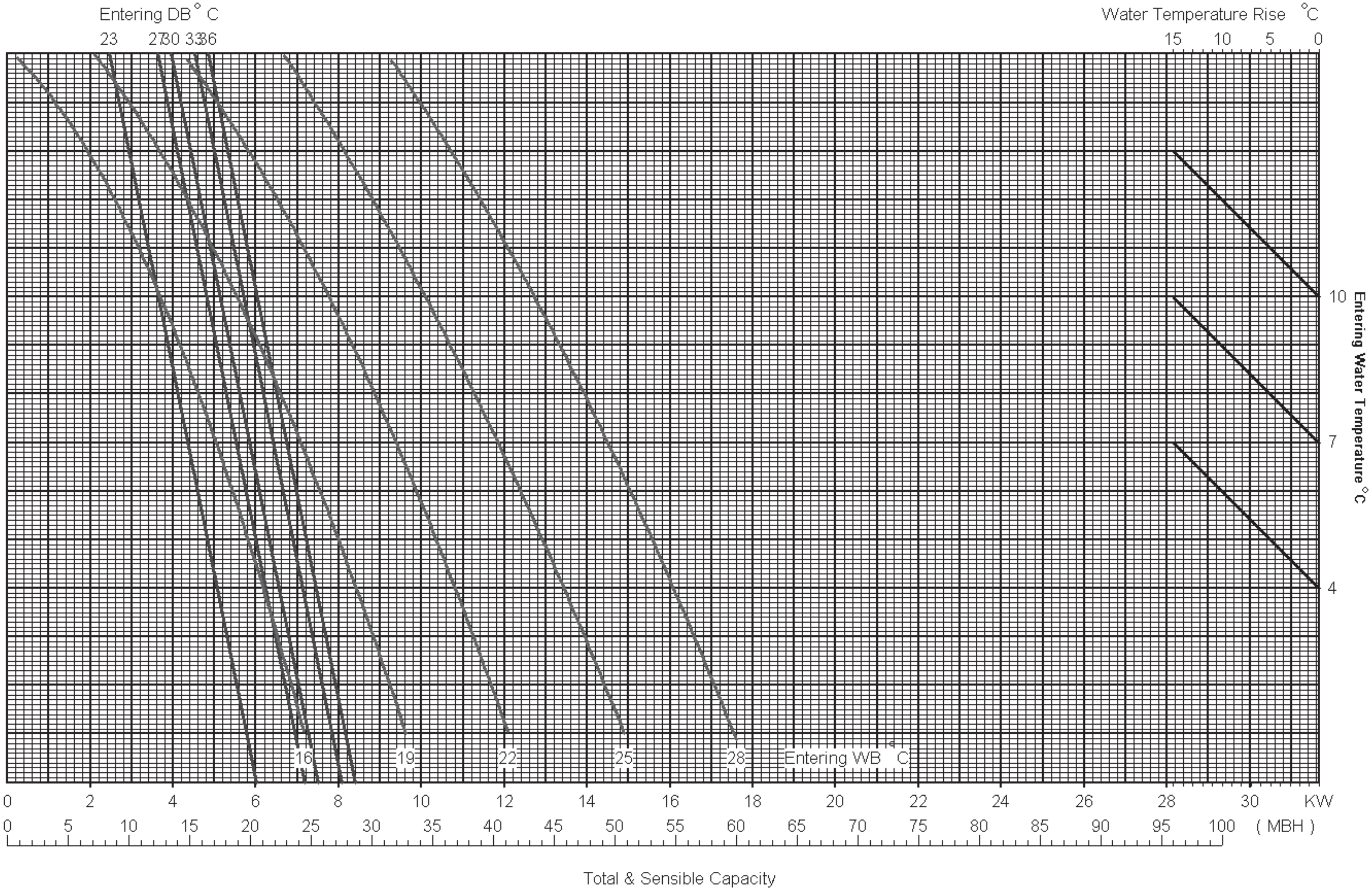
Entering DB° C
23
27
3033
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0
2
4
6
8
10
12
14
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

MCC020CW

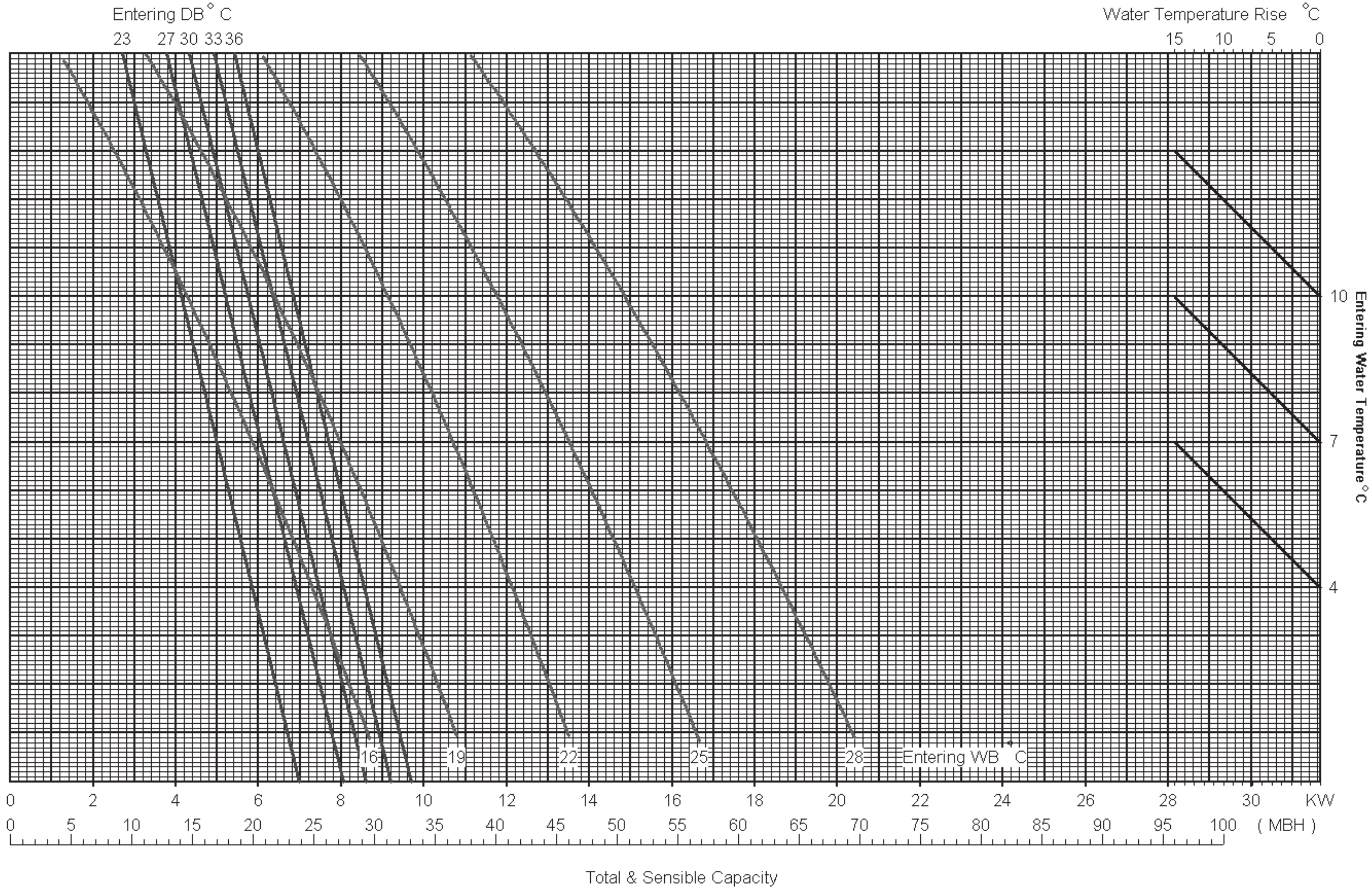


Entering DB ° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0
2
4
6
8
10
12
14
KW
0
5
10
15
20
25
30
35
40
45
50
(MBH)
Total & Sensible Capacity

MCC025CW

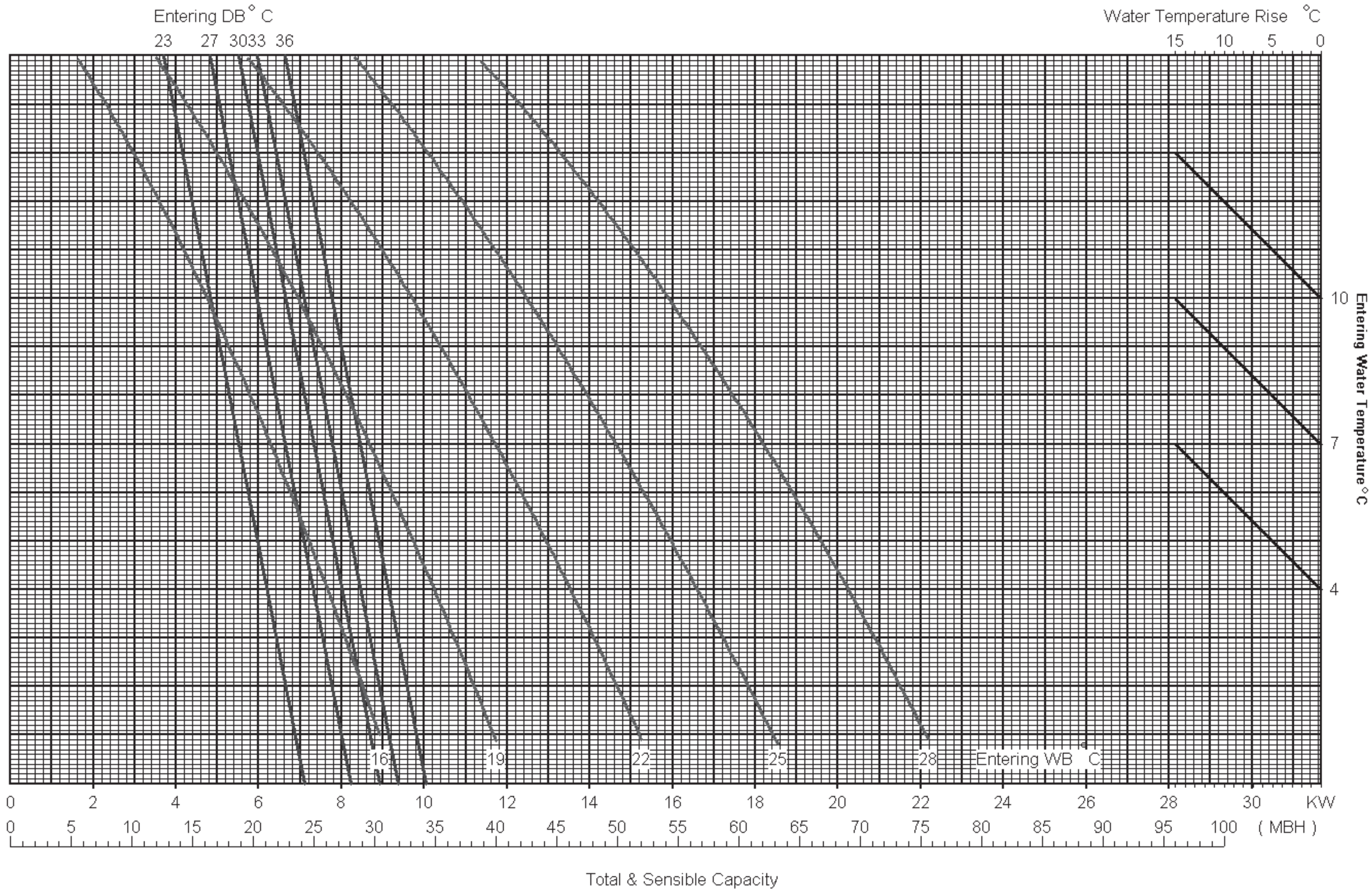

Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
Entering WB °C
16
19
22
25
28
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
KW
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
(MBH)
Total & Sensible Capacity

MCC028CW

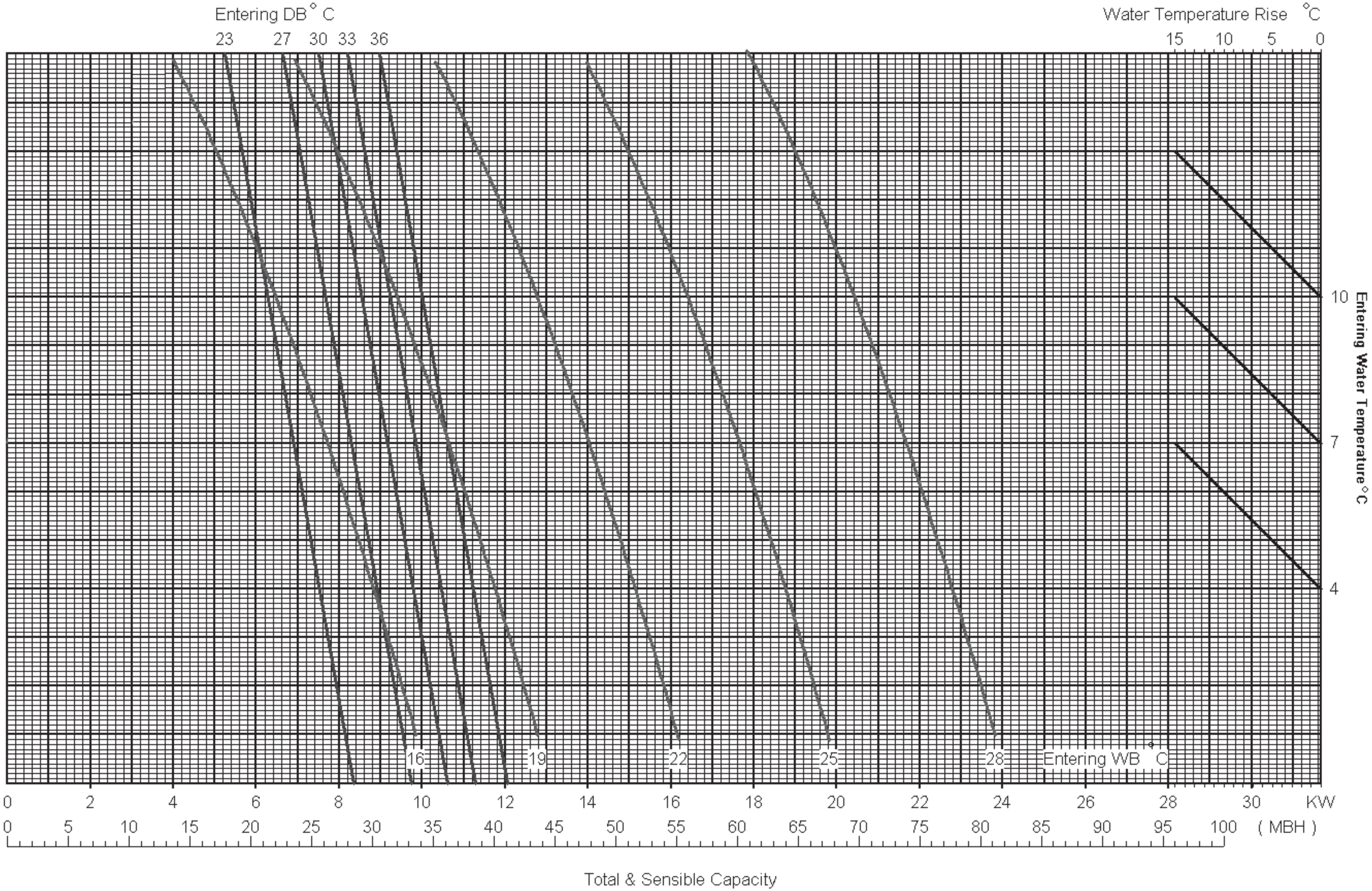


Entering DB ° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB ° C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

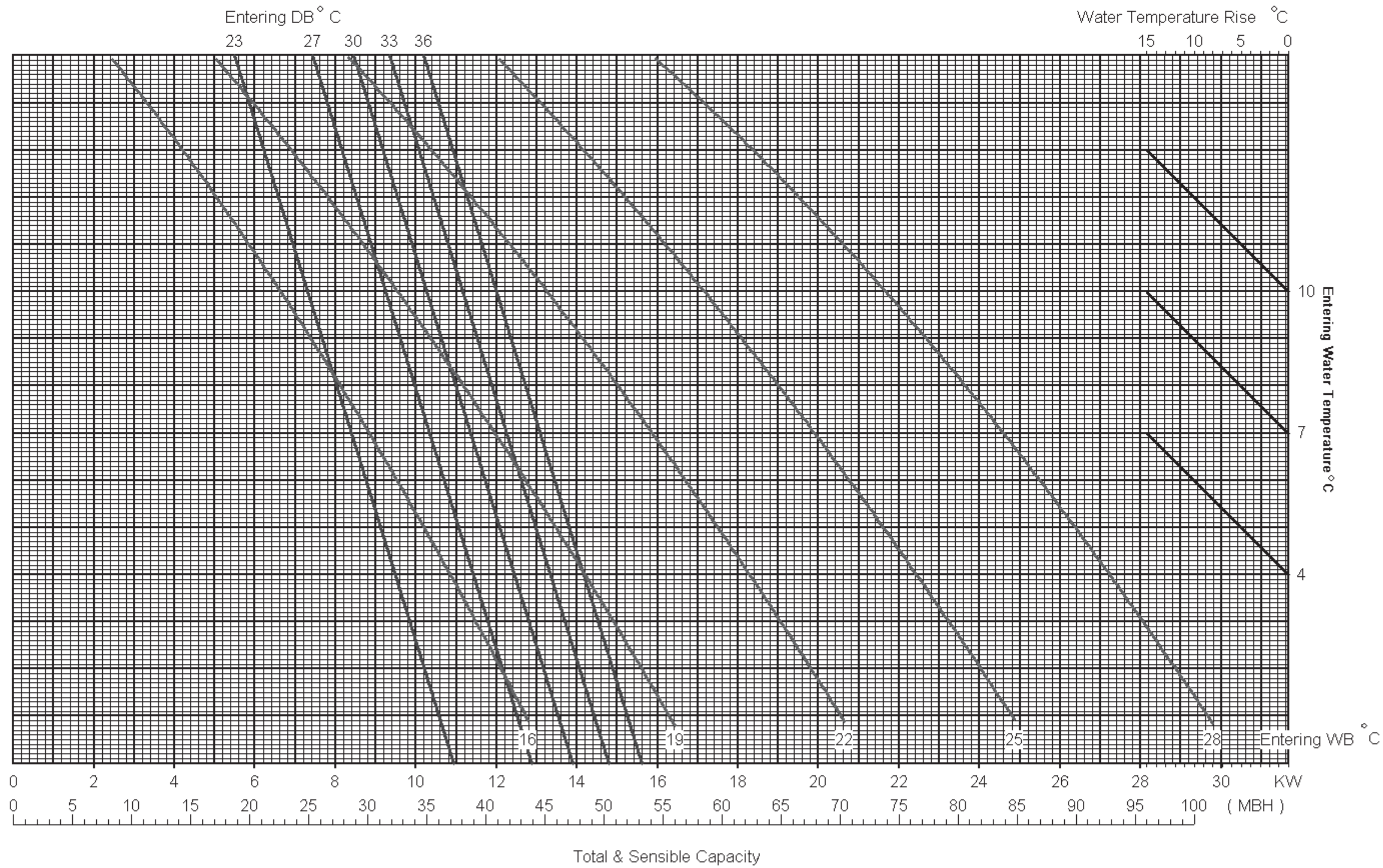
MCC030CW


Entering DB °C
23 27 3033 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCC038CW

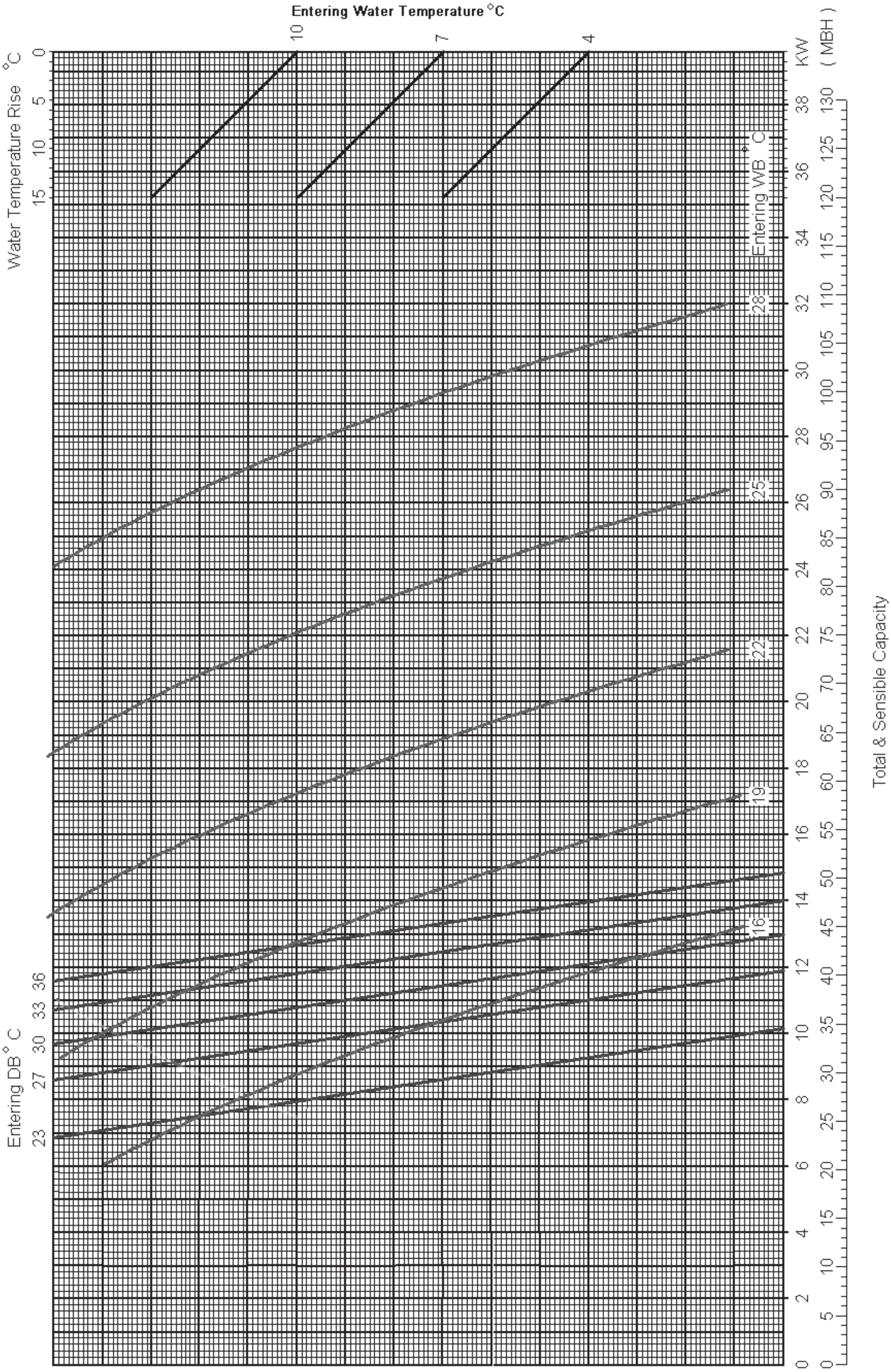

Entering DB ° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCC040CW



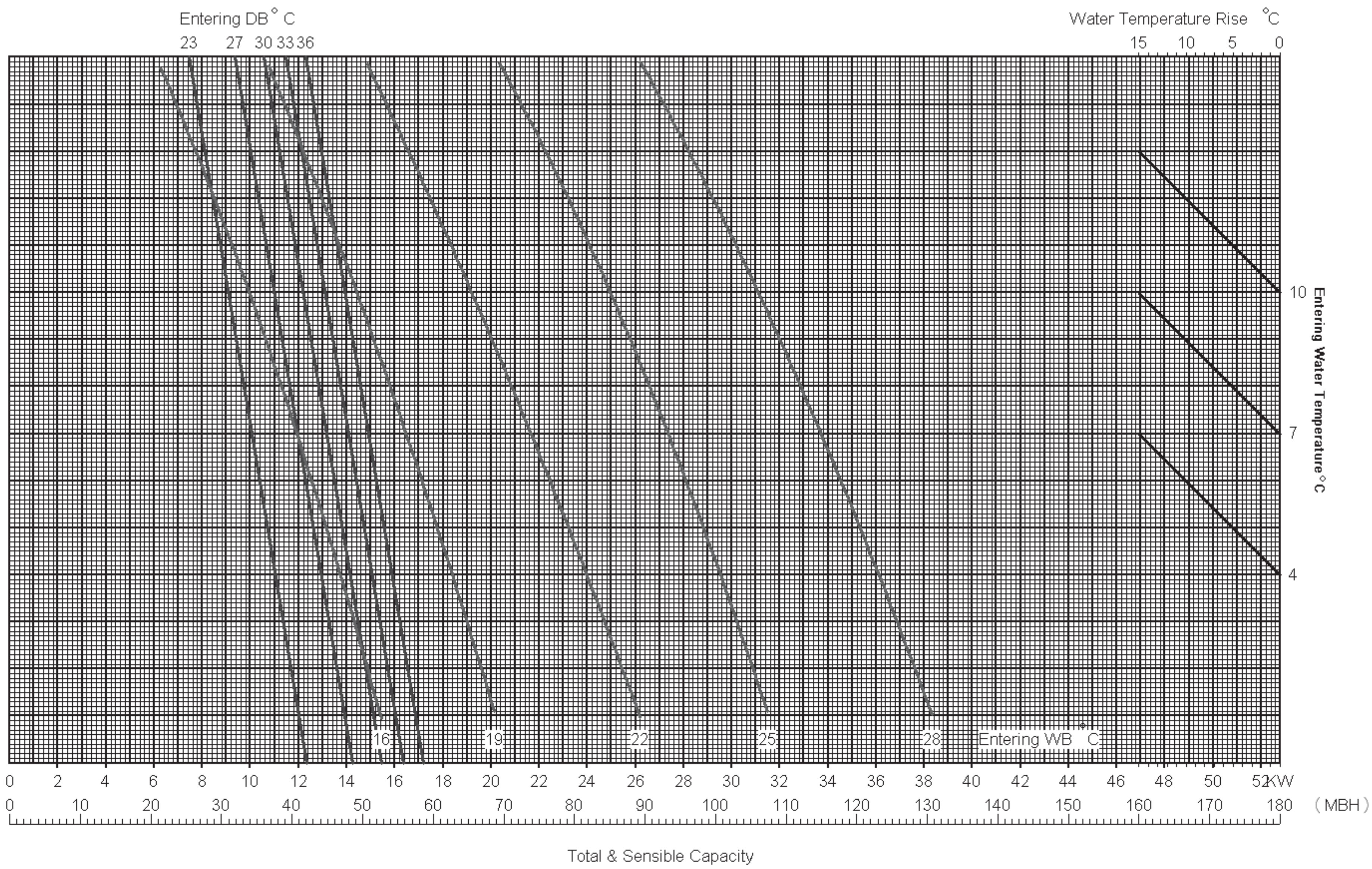
Entering DB° C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 KW
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 (MBH)
Total & Sensible Capacity

MCC050CW



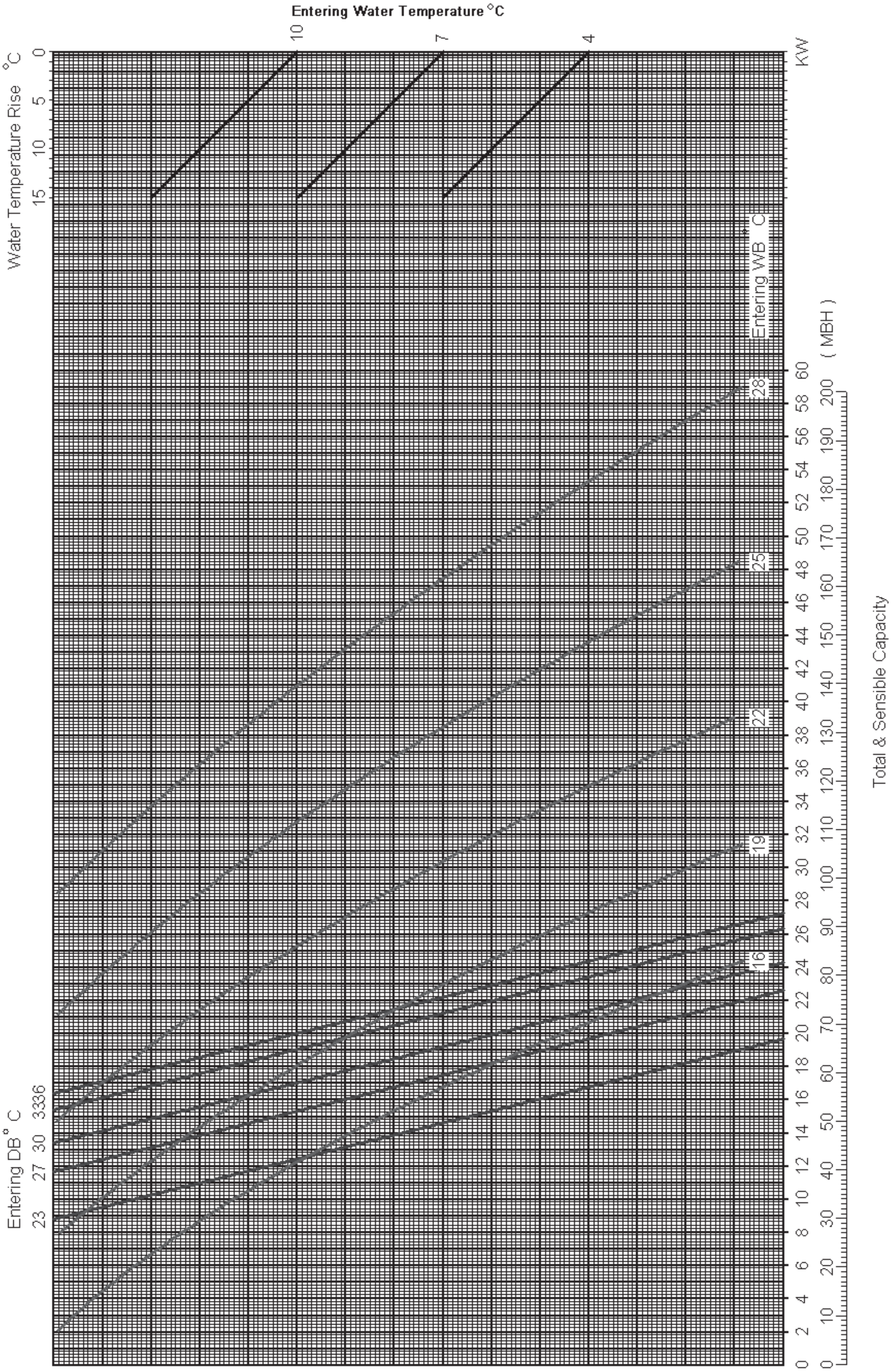
Entering Water Temperature °C
10
7
4
Water Temperature Rise °C
0
5
10
15
Entering DB° C
23
27
30
33
36
Entering WB ° C
16
19
22
25
28
KW
(MBH)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
110
115
120
125
130
Total & Sensible Capacity

MCC060CW



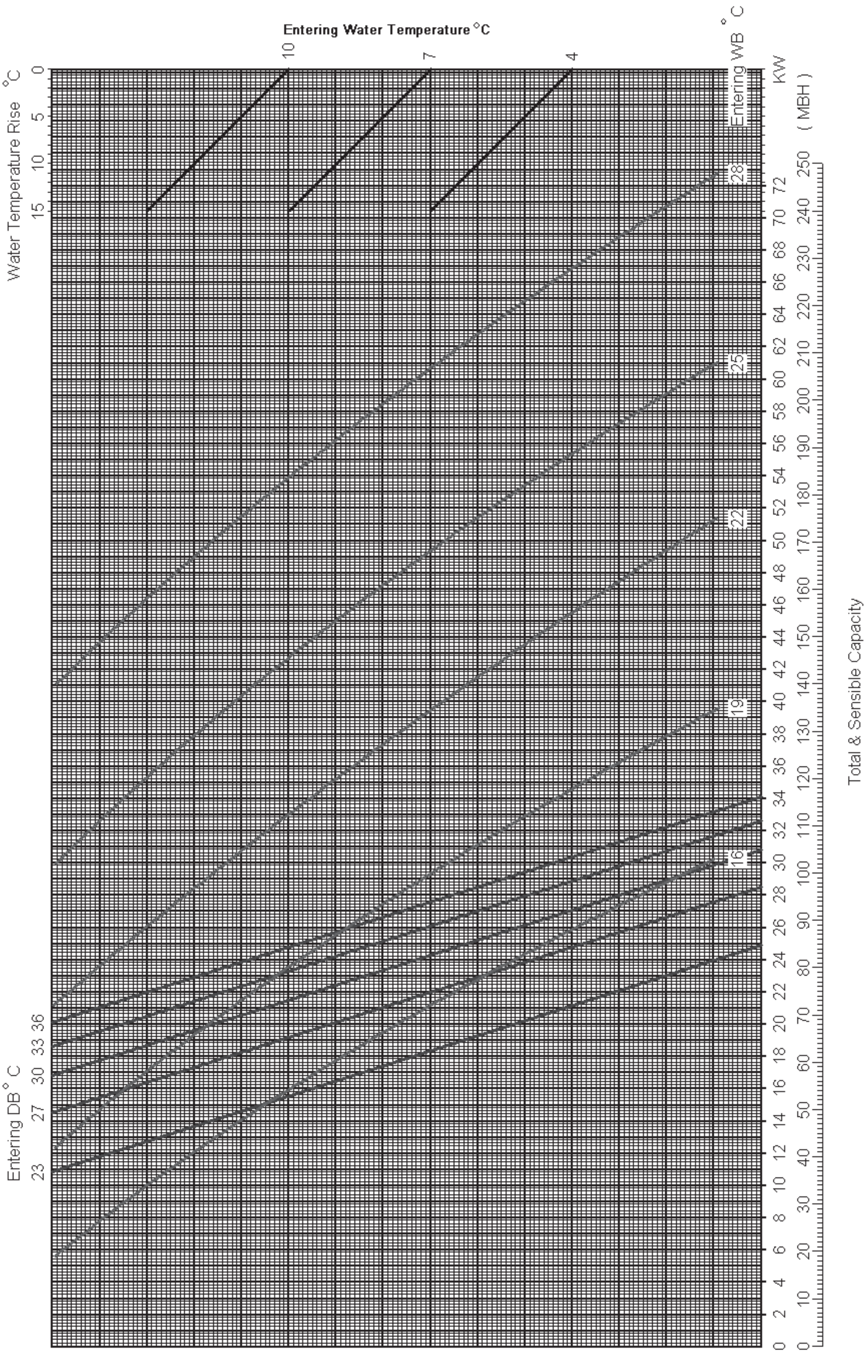
Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature°C
10
7
4
16 19 22 25 28 Entering WB °C
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 KW
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 （MBH）
Total & Sensible Capacity

MDB075BW



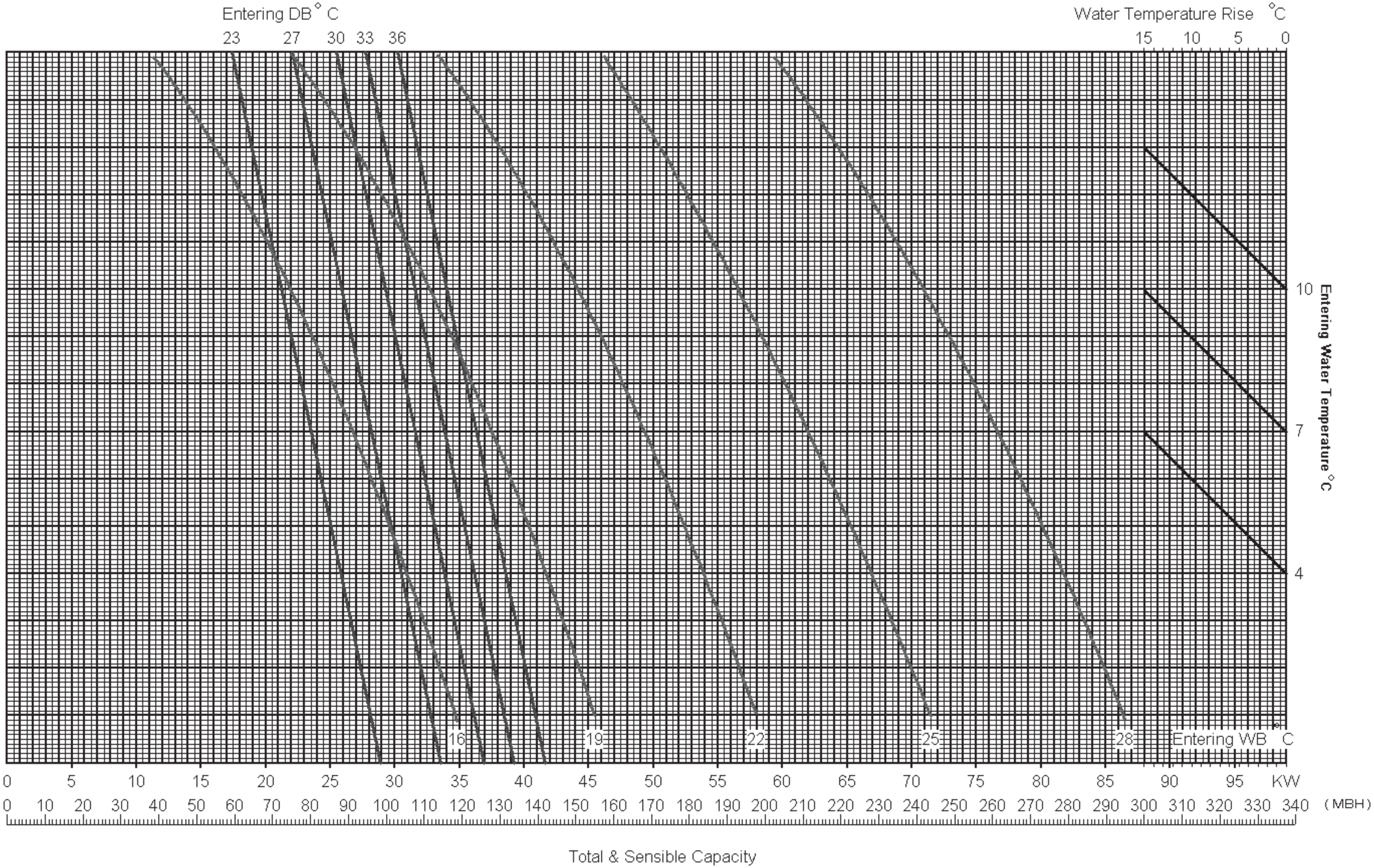
Entering Water Temperature °C
10
7
4
Water Temperature Rise °C
0
5
10
15
KW
Entering WB °C
28
25
22
19
16
Entering DB° C
23
27
30
3336
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
(MBH)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
Total & Sensible Capacity

MDB100BW



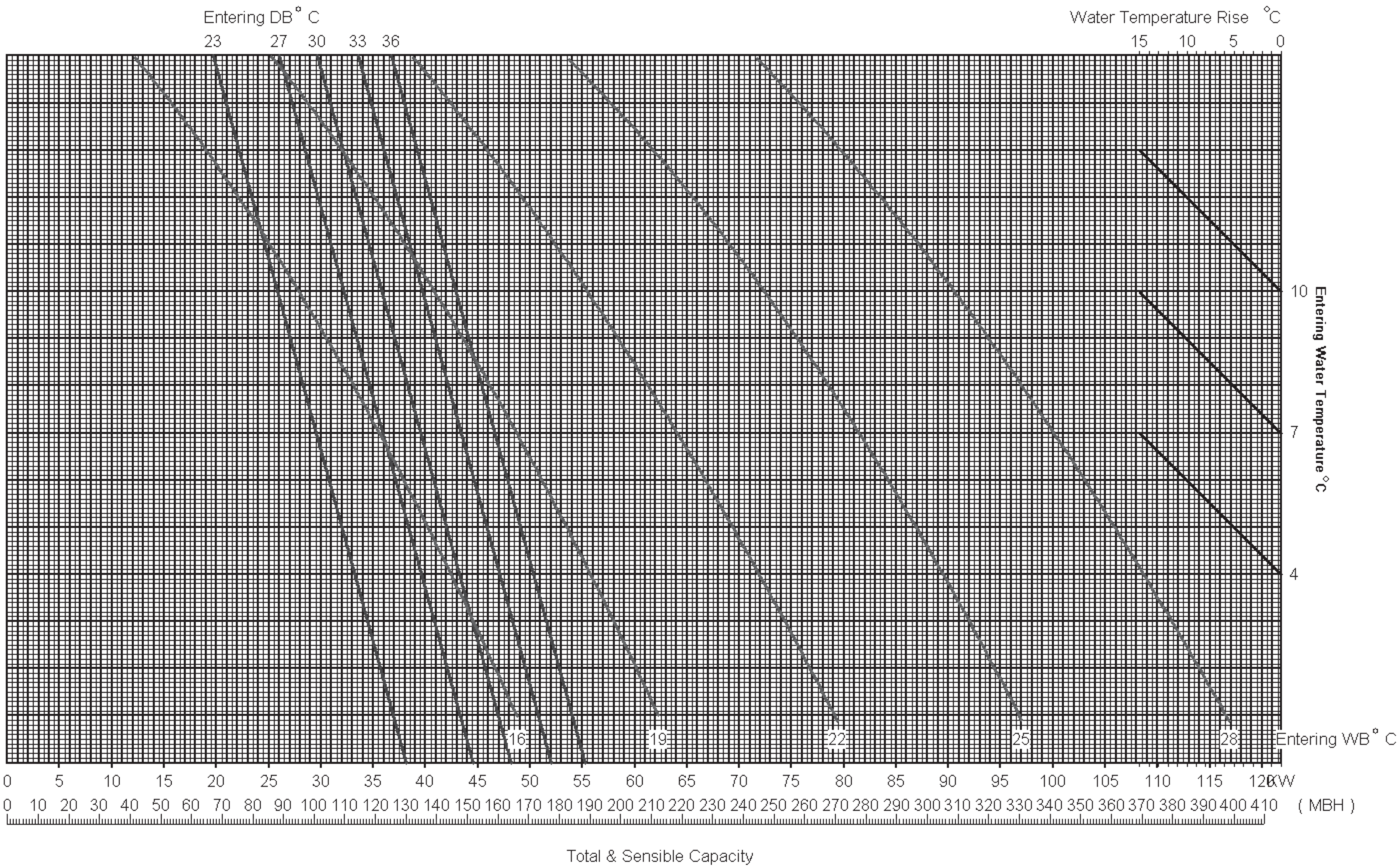
Entering Water Temperature °C
10
7
4
Water Temperature Rise °C
0
5
10
15
Entering DB °C
23
27
30
33
36
Entering WB °C
28
25
22
19
16
KW
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72
(MBH)
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250
Total & Sensible Capacity

MDB125BW



Entering DB °C
23
27
30
33
36
Water Temperature Rise °C
15
10
5
0
Entering Water Temperature °C
10
7
4
16
19
22
25
28
Entering WB °C
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 KW
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 (MBH)
Total & Sensible Capacity

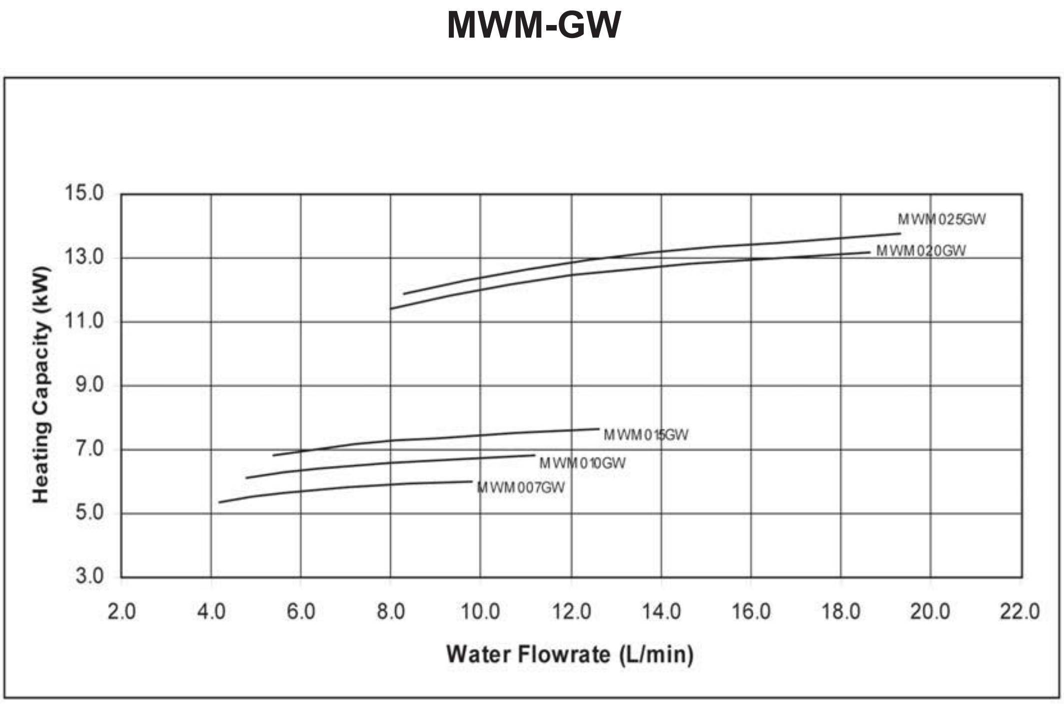
MDB150BW



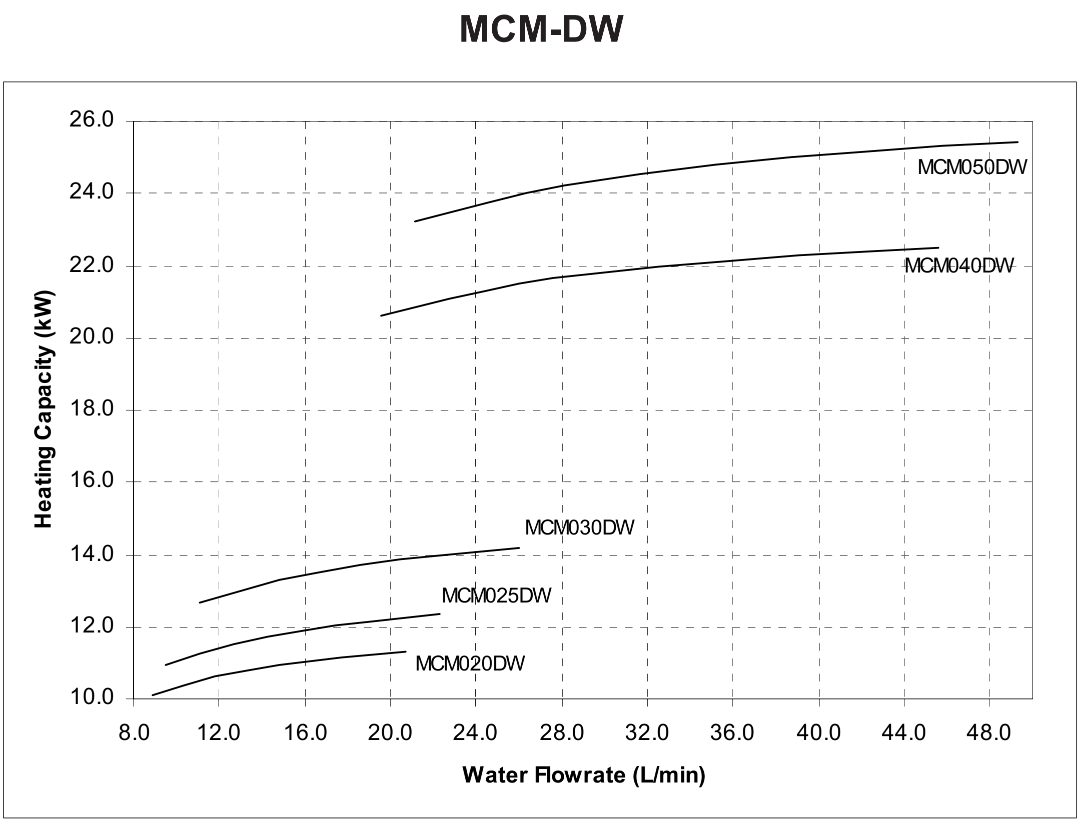
Entering DB° C
23 27 30 33 36
Water Temperature Rise °C
15 10 5 0
Entering Water Temperature °C
10
7
4
16 19 22 25 28
Entering WB° C
0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100 105 110 115 120 KW
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 (MBH)
Total & Sensible Capacity

Heating Capacity Performance Chart

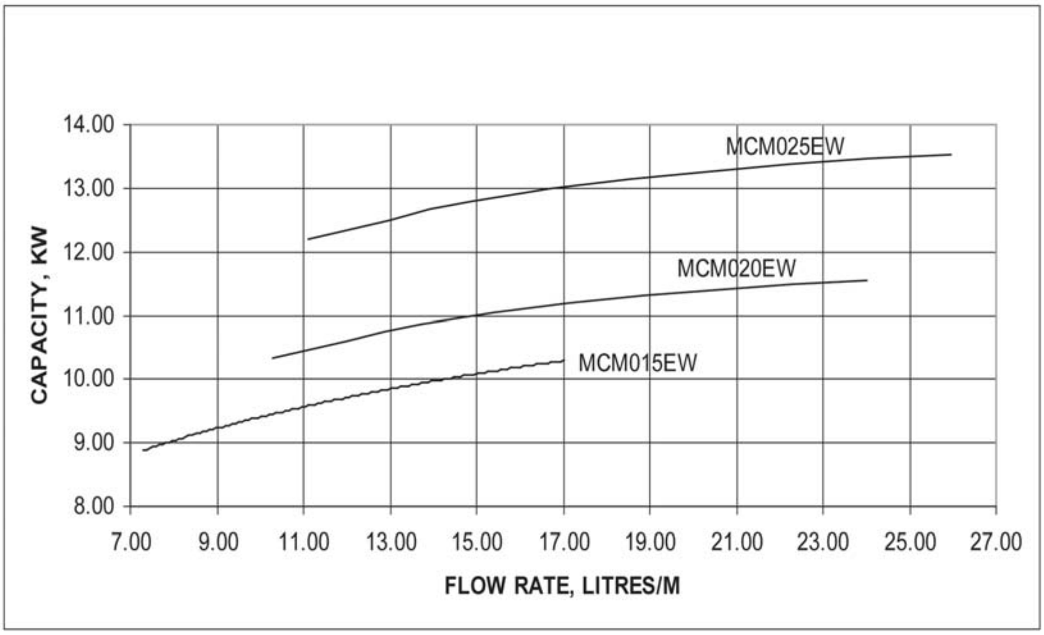
Wall Mounted Split Type



Ceiling Exposed Split Type

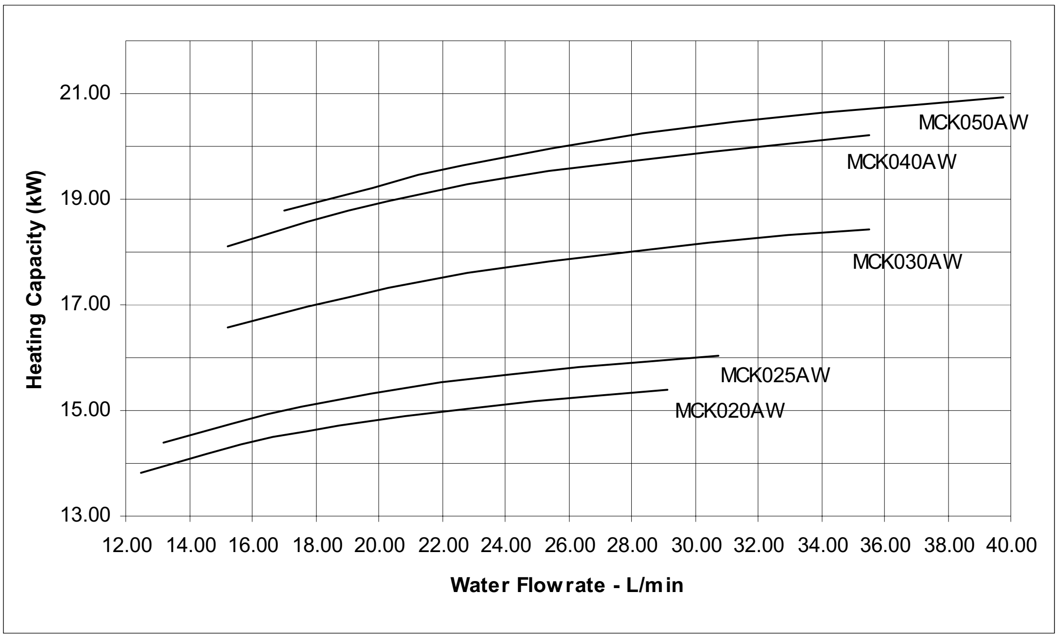


MCM-EW



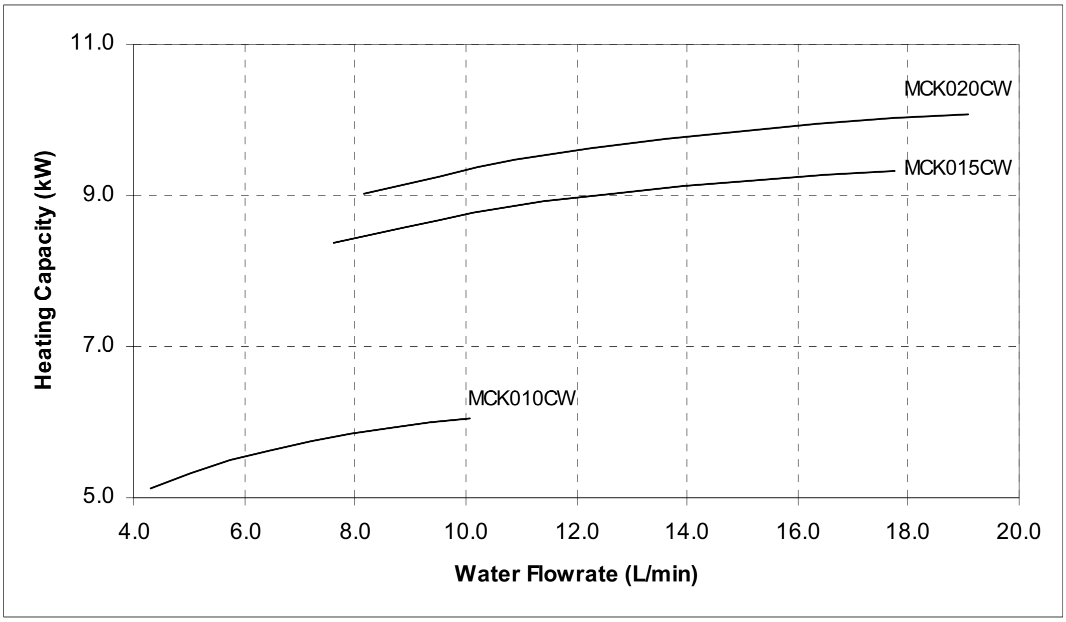
Ceiling Cassette Split Type

MCK-AW

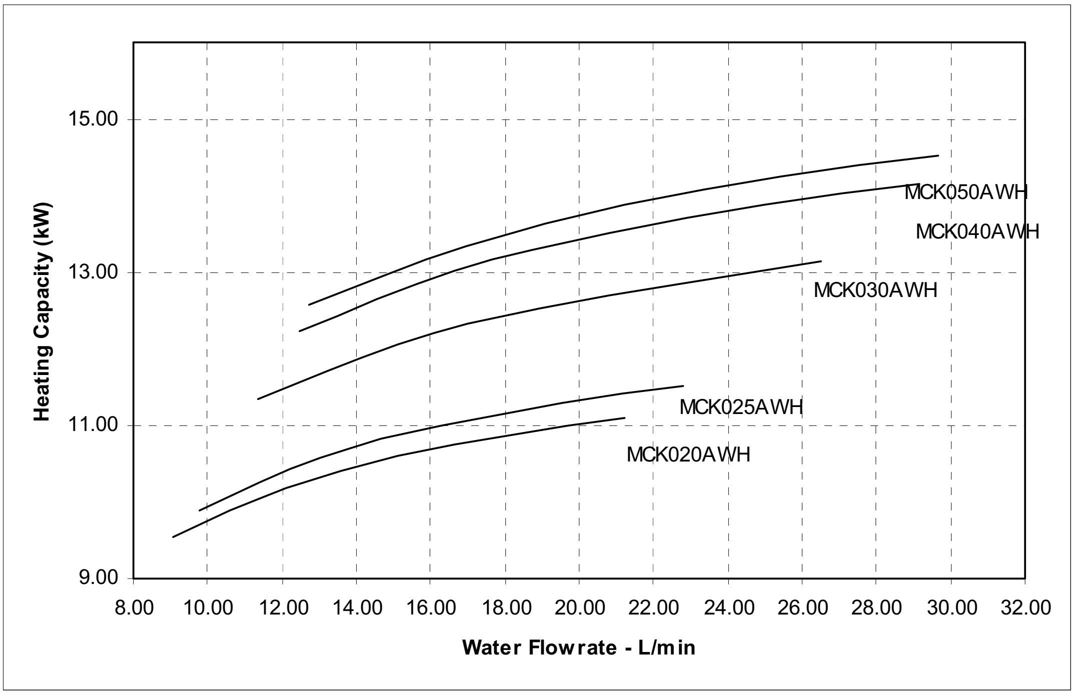


Ceiling Cassette Split Type

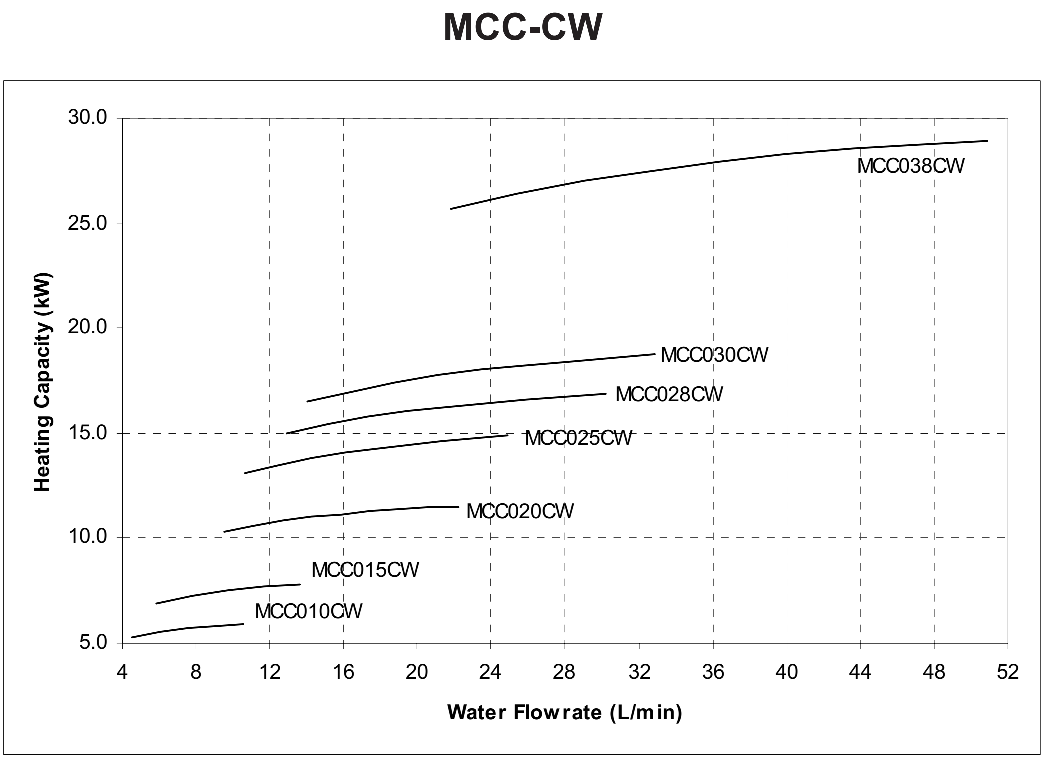
MCK-CW

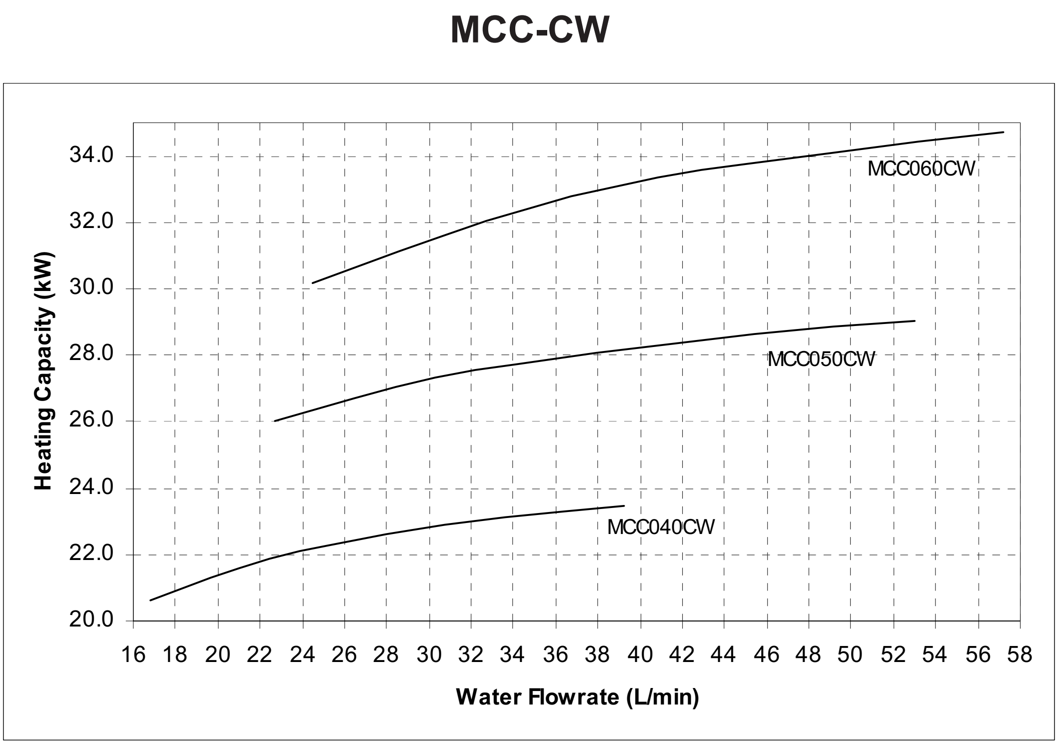


MCK-AWH



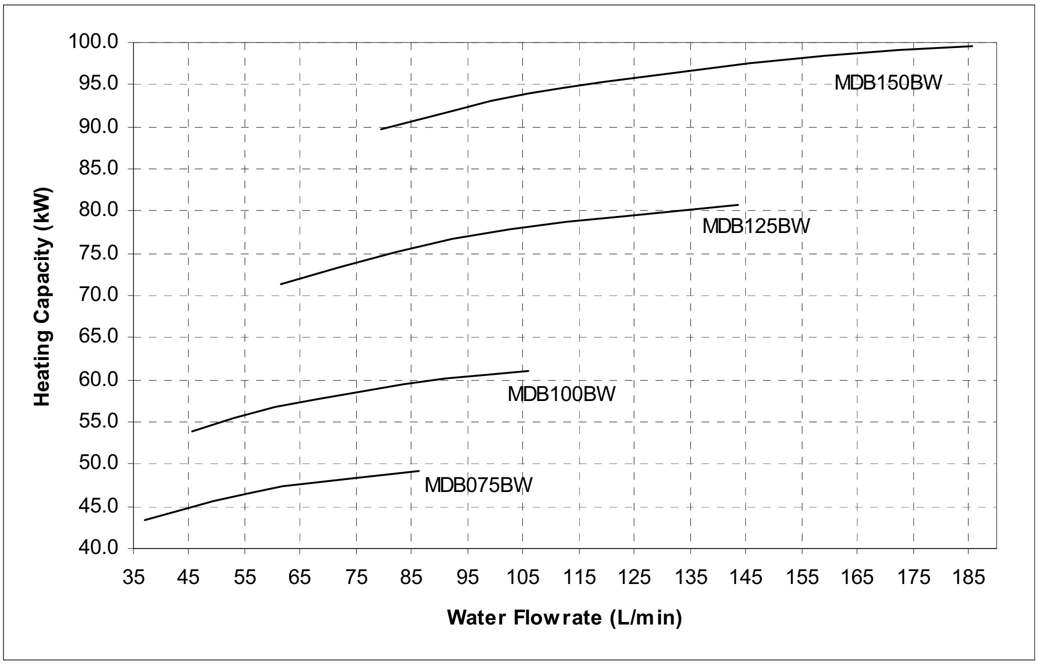
Ceiling Concealed Split Type





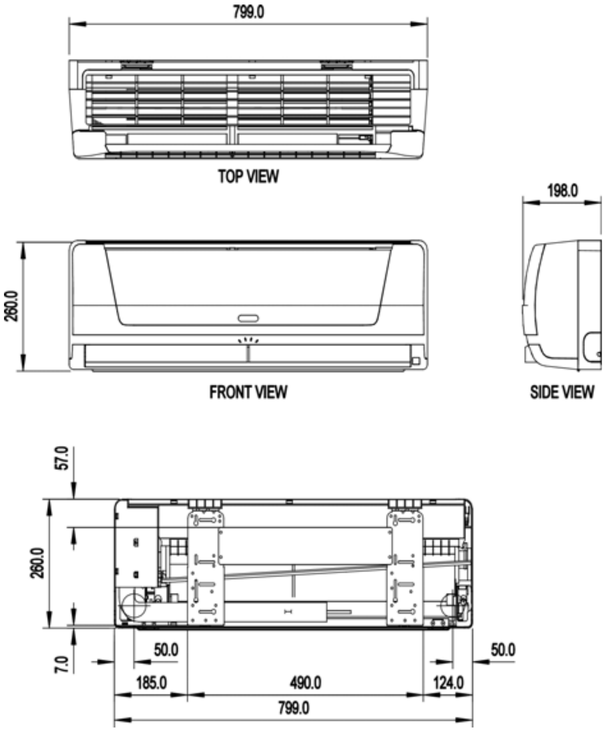
Ducted Split Type

MDB-BW



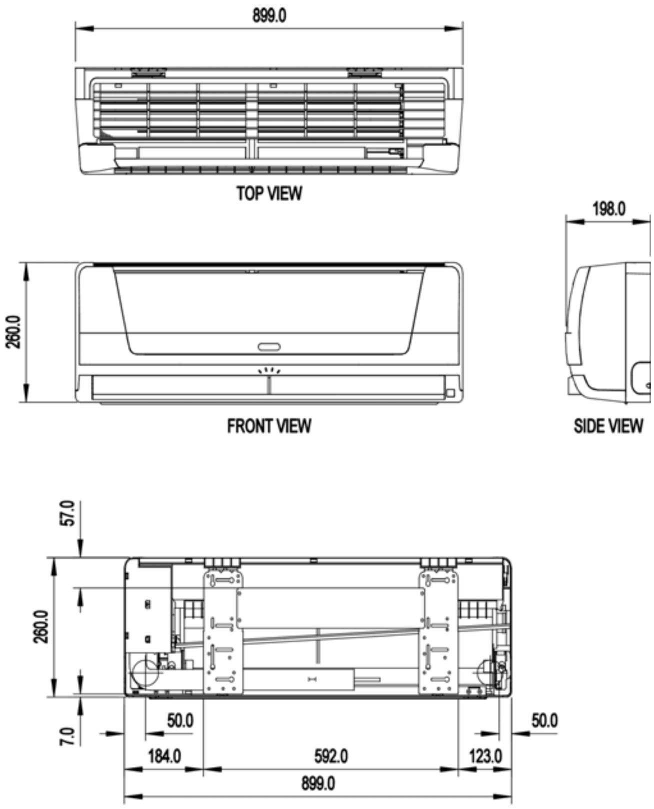
Dimensional Data

Indoor Unit
Model : MWM 007GW



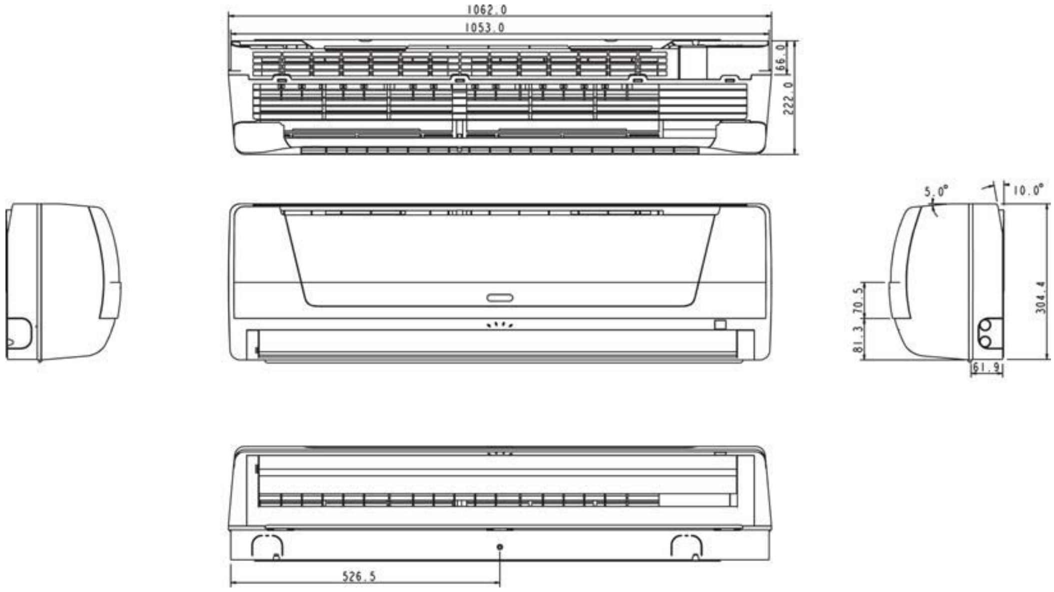
Dimension in mm

Indoor Unit
Model : MWM 010 / 015 GW

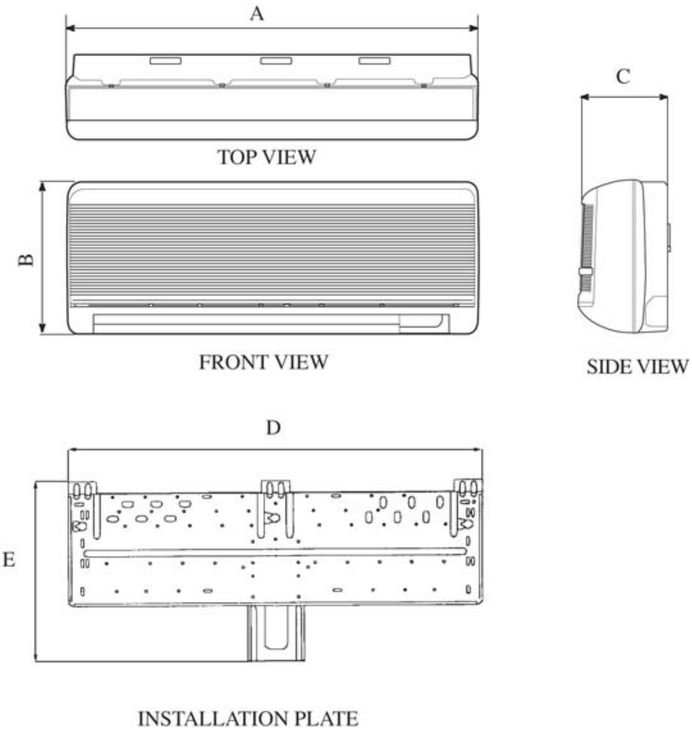


Dimension in mm

Indoor Unit
Model : MWM 020 / 025GW



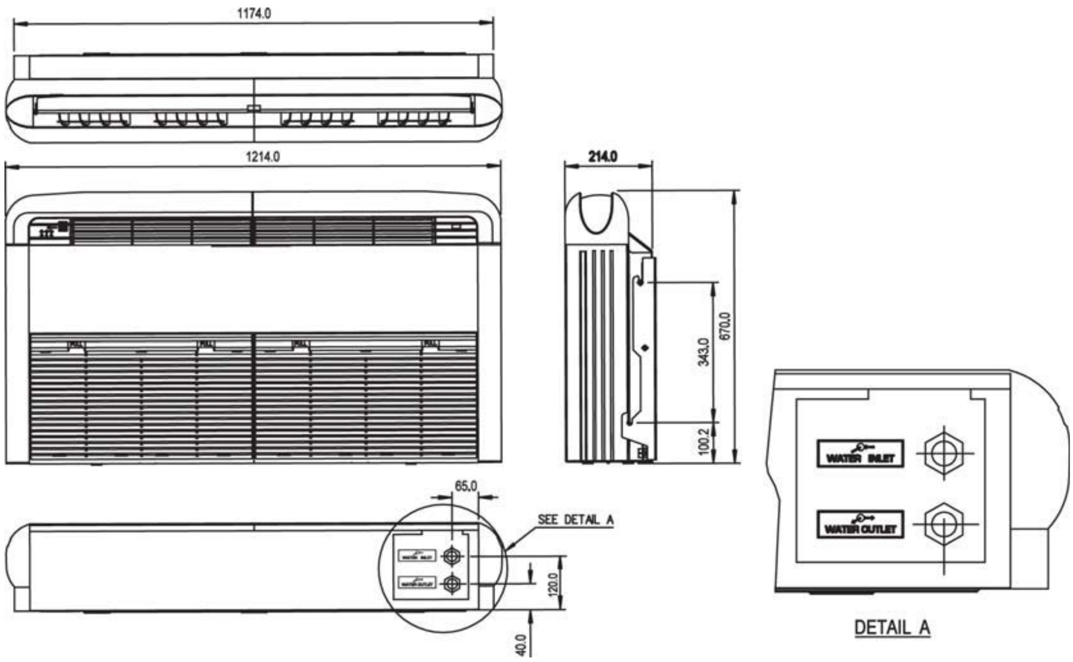
Indoor Unit
Model : MWM 301W



Dimension	A	B	C	D	E
MWM301W	1120.0 (44.1)	360.0 (14.2)	200.0 (7.9)	730.0 (28.7)	347.0 (13.7)

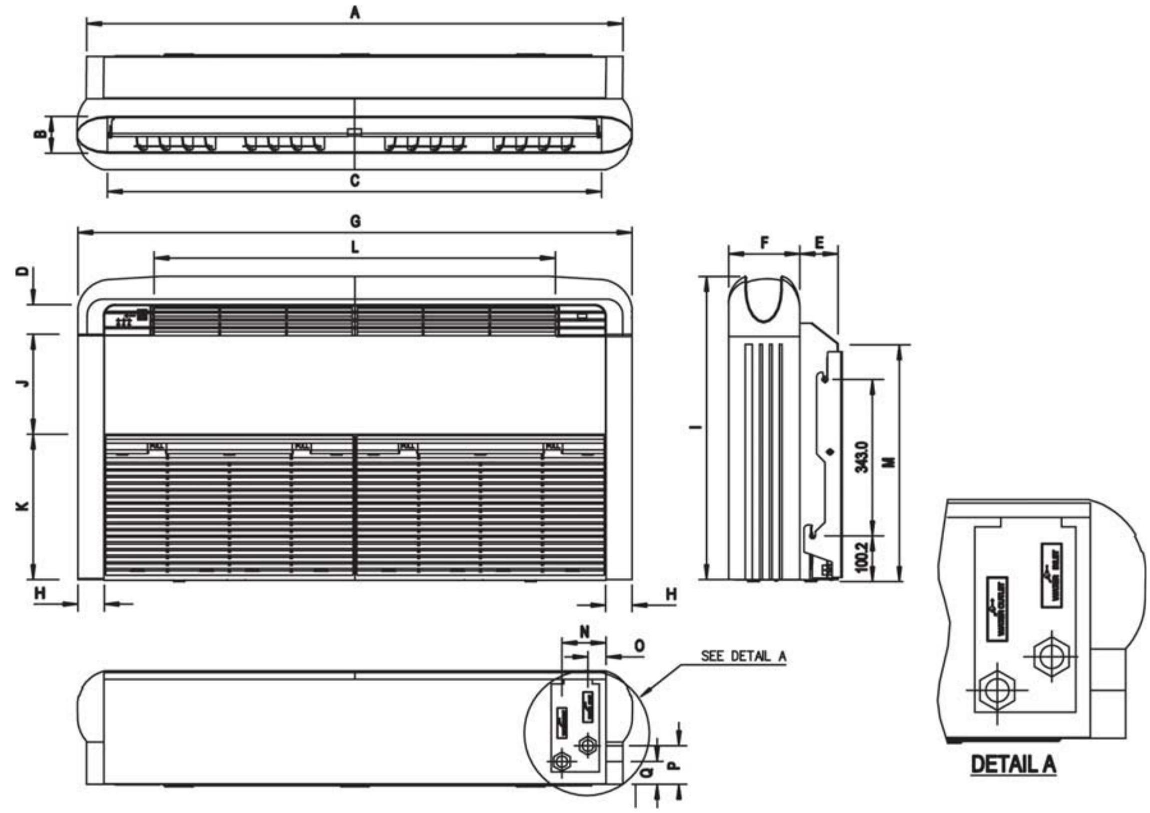
All dimensions are in mm/ (in)

Indoor Unit
Model : MCM 020 / 025 DW



Dimension in mm

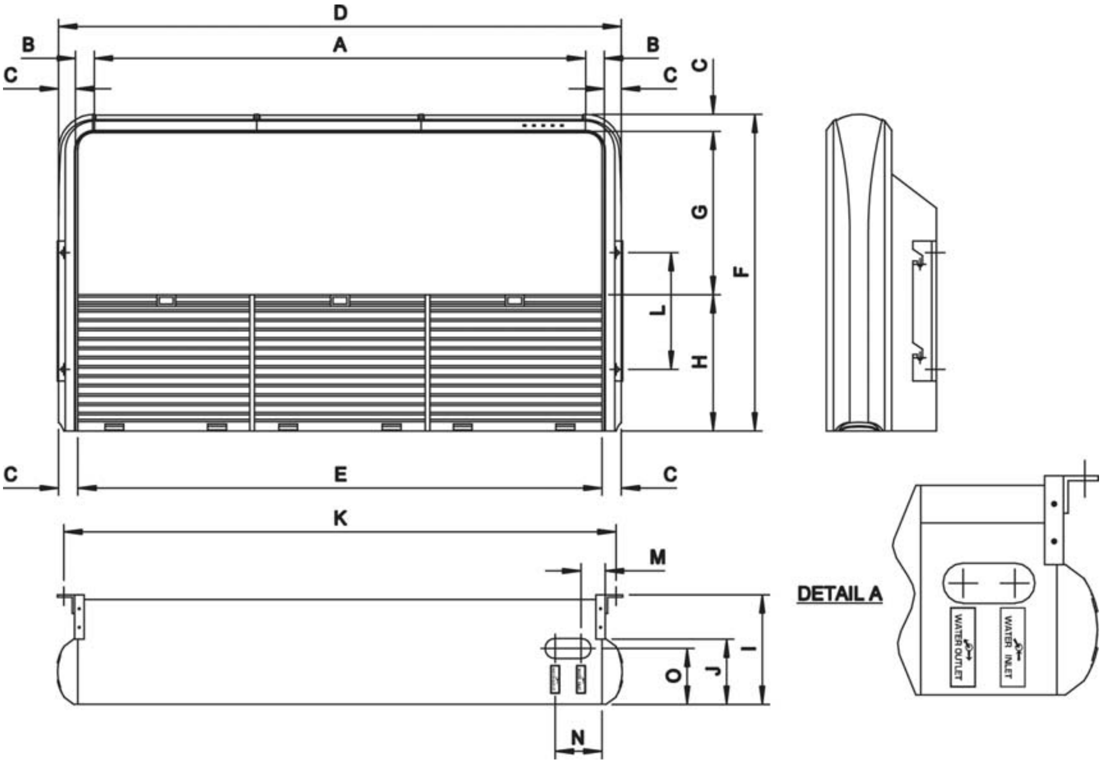
Indoor Unit
Model : MCM 030 / 040 / 050 DW



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
MCM030DW	1174	75	1082	68	93	156	1214	57	670	216	319	879	517	100	47	100	53
MCM040DW	1674	75	1582	68	93	156	1714	57	670	216	319	1379	517	95	40	100	45
MCM050DW	1674	75	1582	68	93	156	1714	57	670	216	319	1379	517	95	40	100	45

Dimension in mm

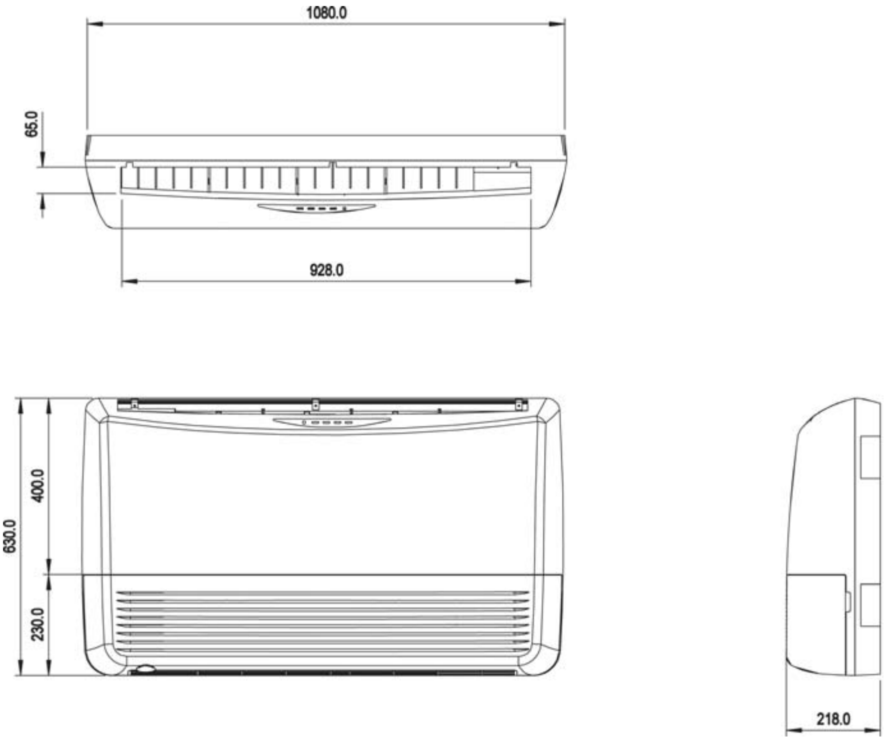
Indoor Unit
Model : MCM 007 / 010 / 015 CBW



MODEL	A (GRILL)	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MCM 007CBW	700	40	36	853	780	680	352	292	235	140	830	250	50	100	120
MCM 010CBW	700	40	36	853	780	680	352	292	235	140	830	250	50	100	120
MCM 015CBW	1050	40	36	1203	1130	680	352	292	235	140	1180	250	50	100	120

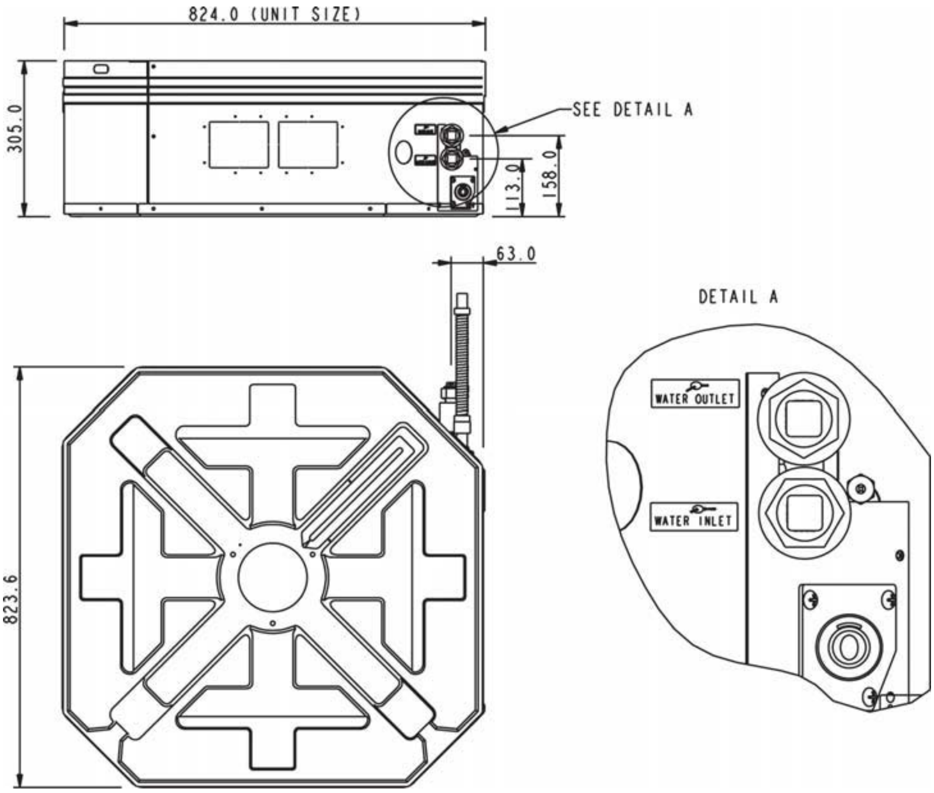
Dimension in mm

Indoor Unit
Model : MCM 015 / 020 / 025 EW



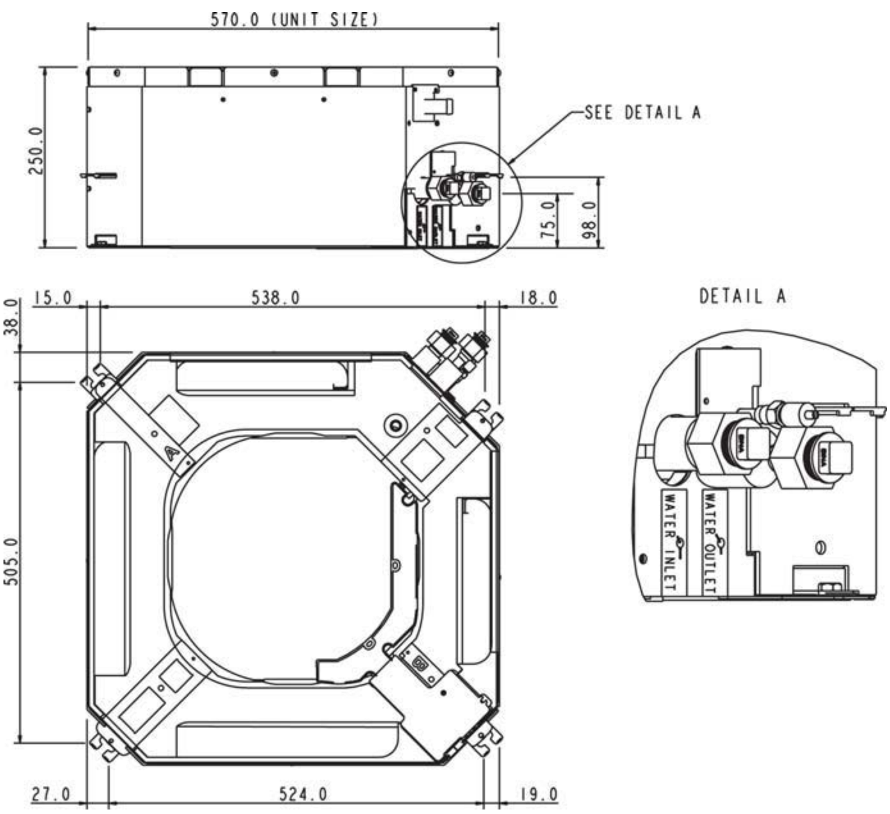
Dimension in mm

Indoor Unit
Model : MCK 020 / 025 / 030 / 040 / 050 AW



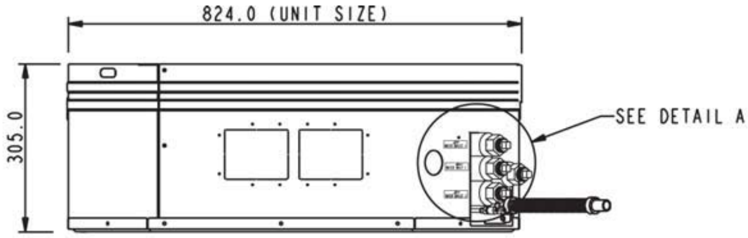
Dimension in mm

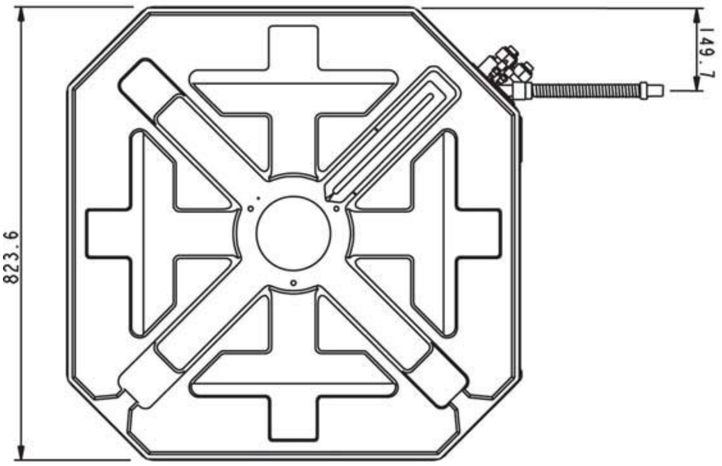
Indoor Unit
Model : MCK 010 / 015 / 020 CW

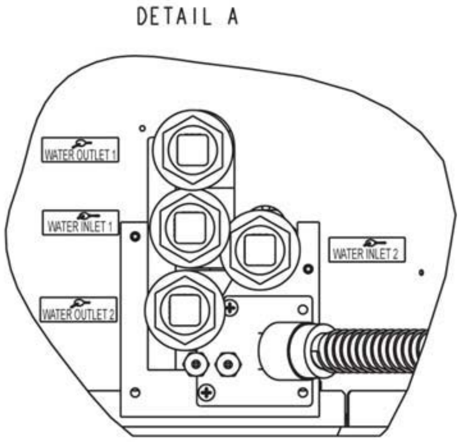


Dimension in mm

Indoor Unit
Model : MCK 020 / 025 / 030 / 040 / 050 AWH



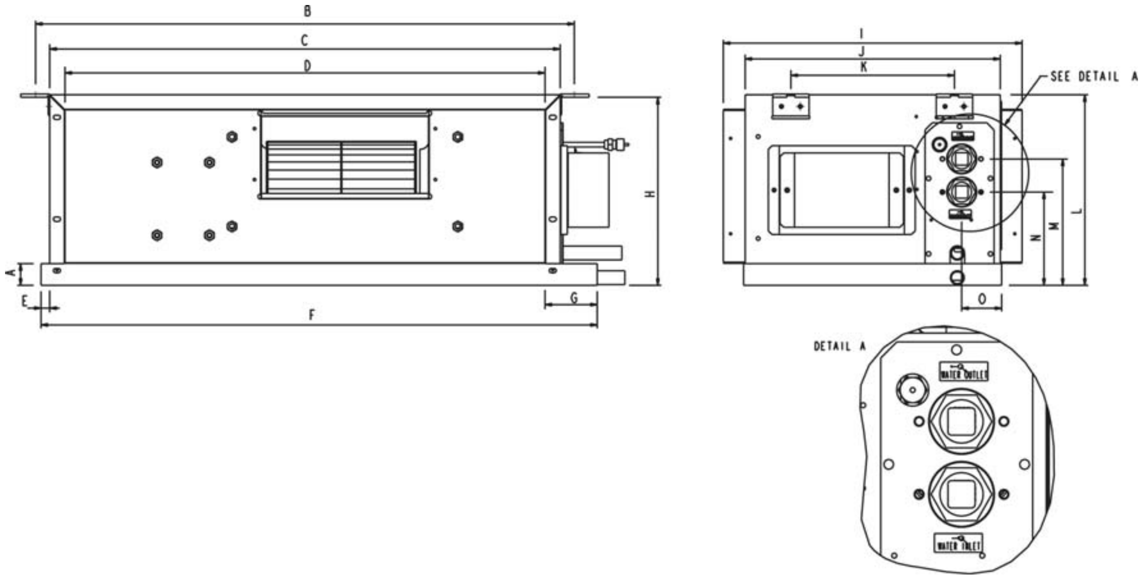




Water Inlet/Outlet 1 = connection to chiller
Water Inlet/Outlet 2 = connection to boiler

Dimension in mm

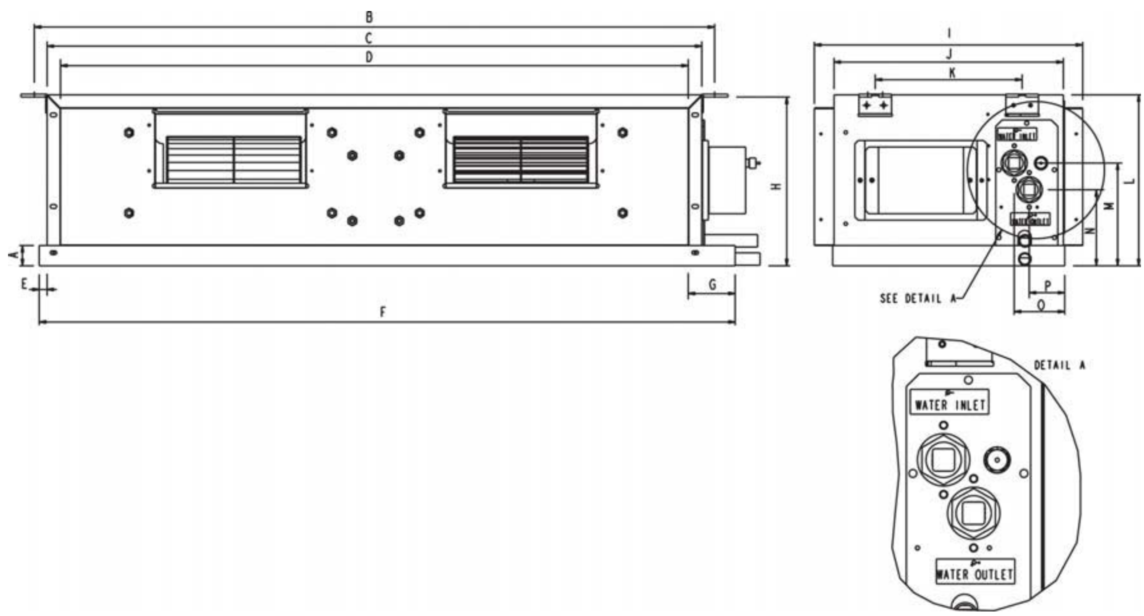
Indoor Unit
Model : MCC 010 / 015CW



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MCC010CW	31	741	702	662	10	765	72	261	411	349	225	261	171	118	77
MCC015CW	31	881	841	802	10	905	72	261	411	349	225	261	171	118	77

Dimension in mm

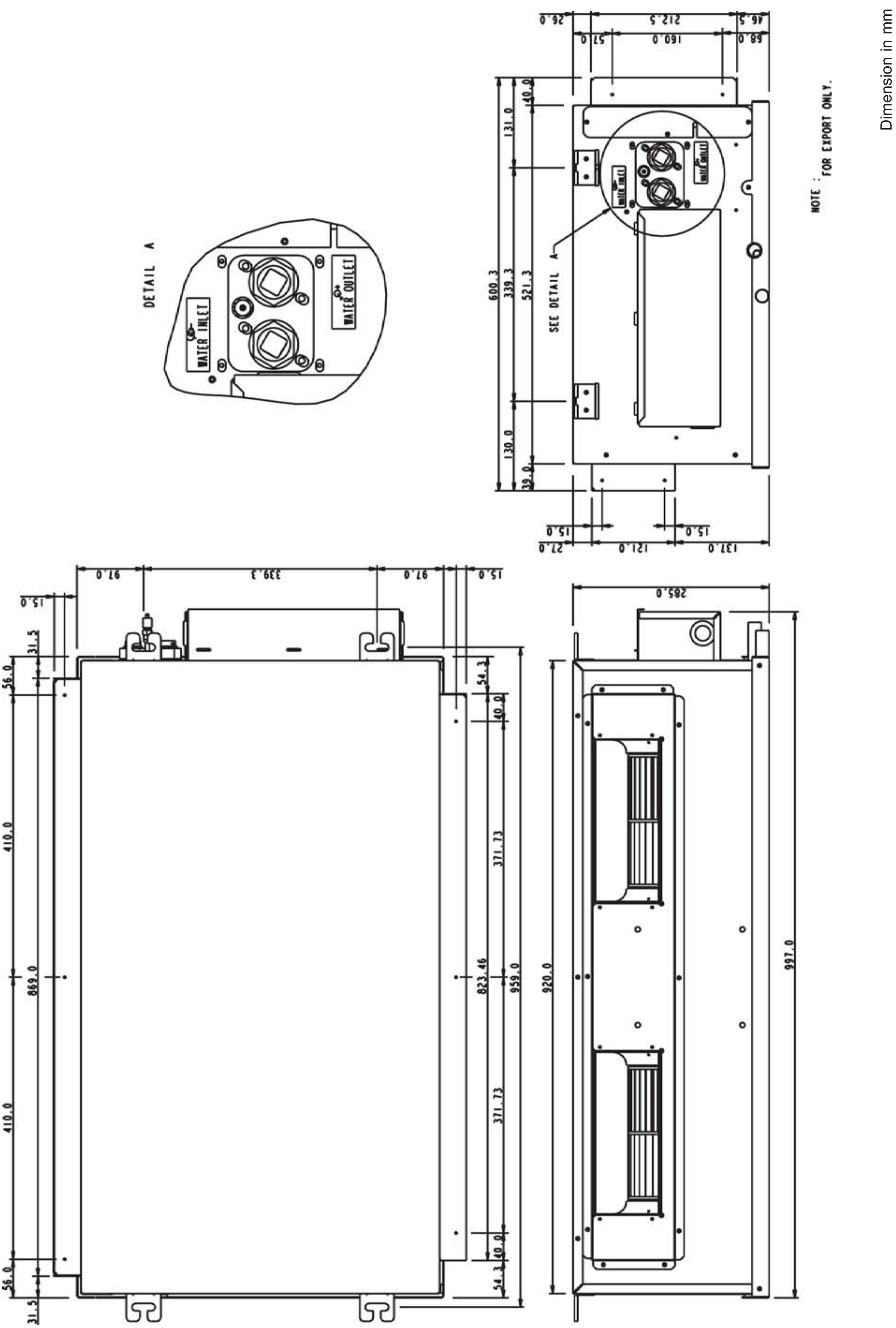
Indoor Unit
Model : MCC 020 / 025 CW



MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
MCC020CW	31	1041	1002	962	10	1065	72	261	411	349	225	261	174	128	55	55
MCC025CW	31	1176	1137	1097	10	1200	72	261	411	349	225	261	171	118	77	54

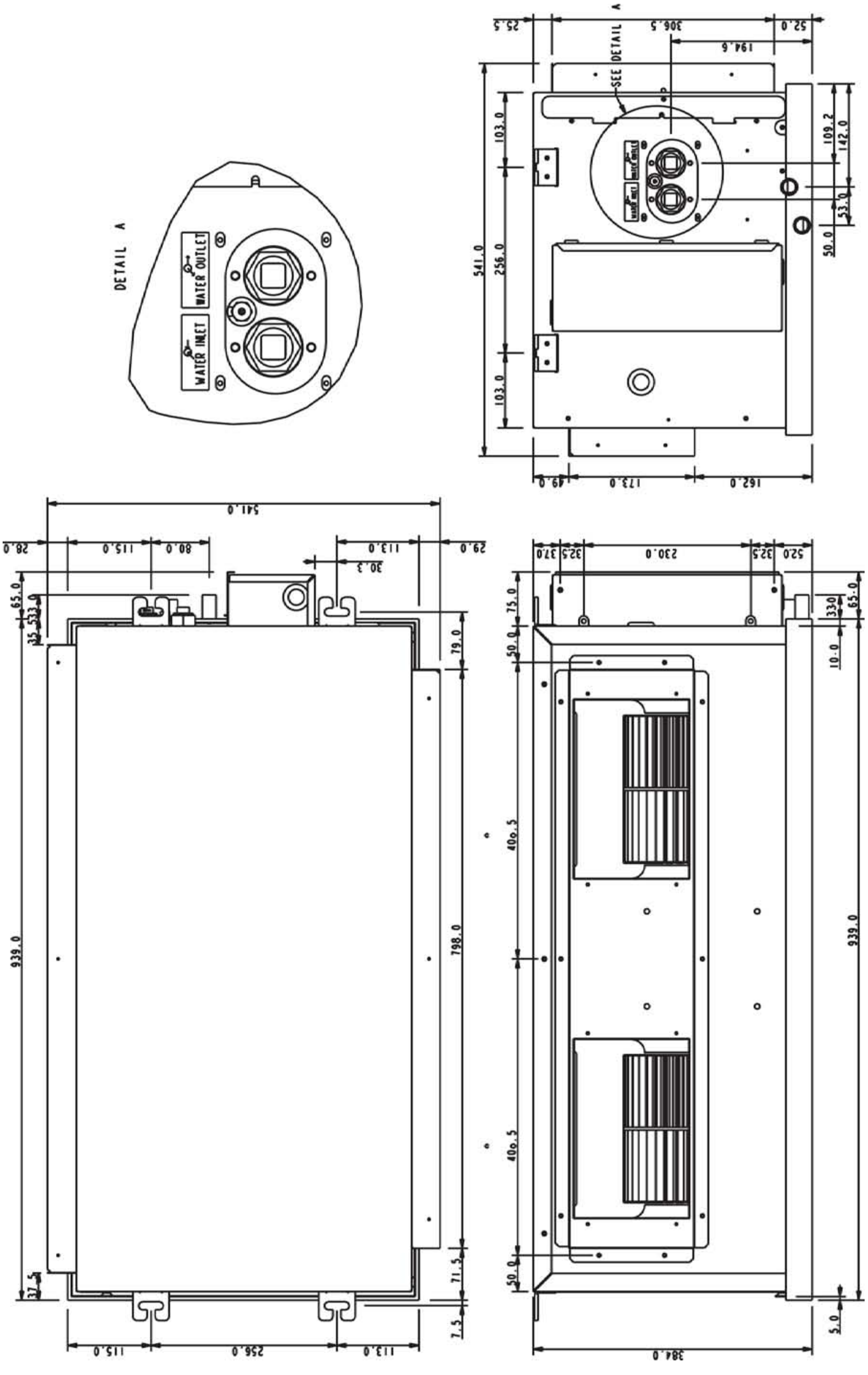
Dimension in mm

Indoor Unit
Model : MCC 028CW



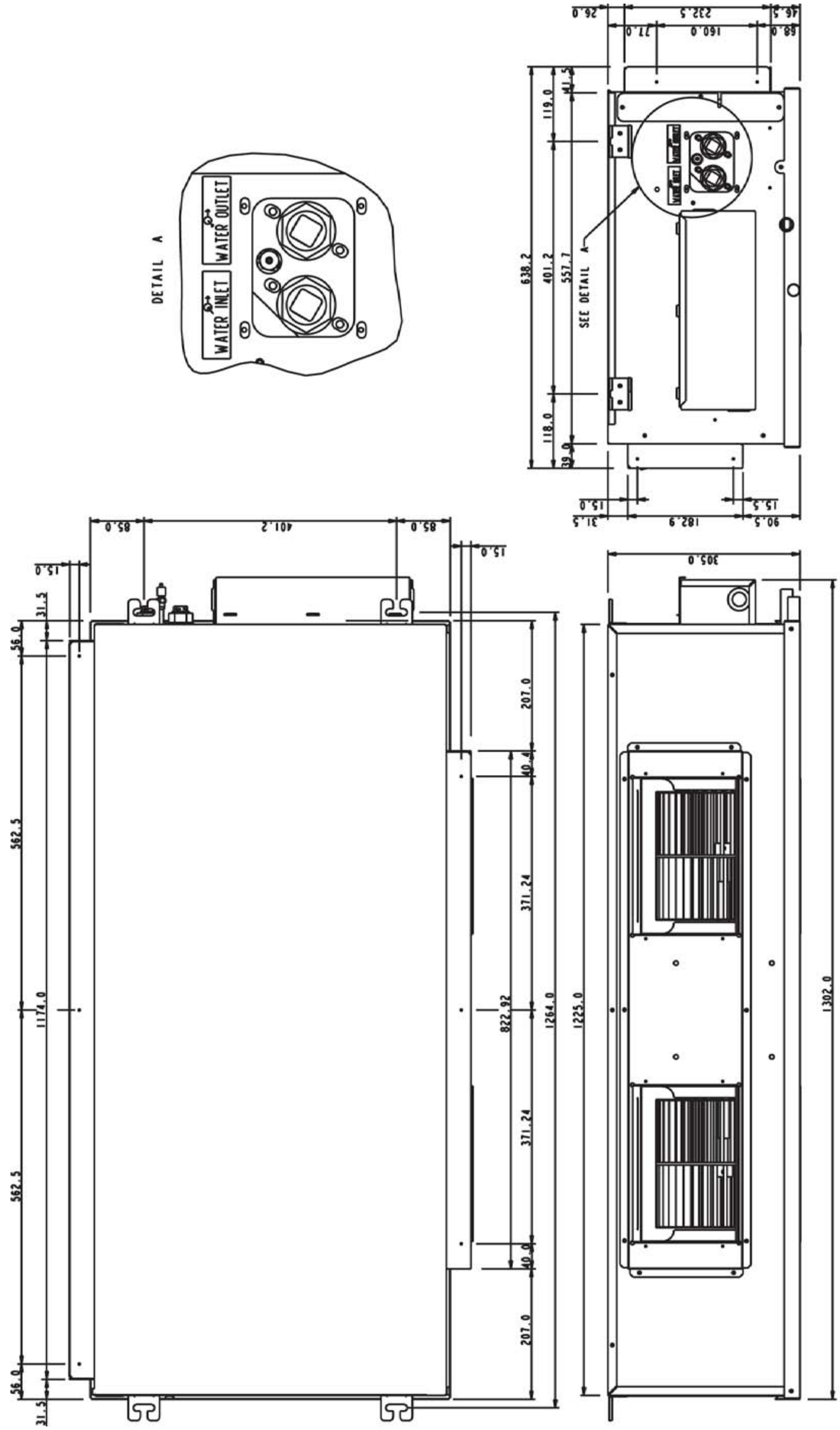
Indoor Unit
Model : MCC 030CW

Dimension in mm



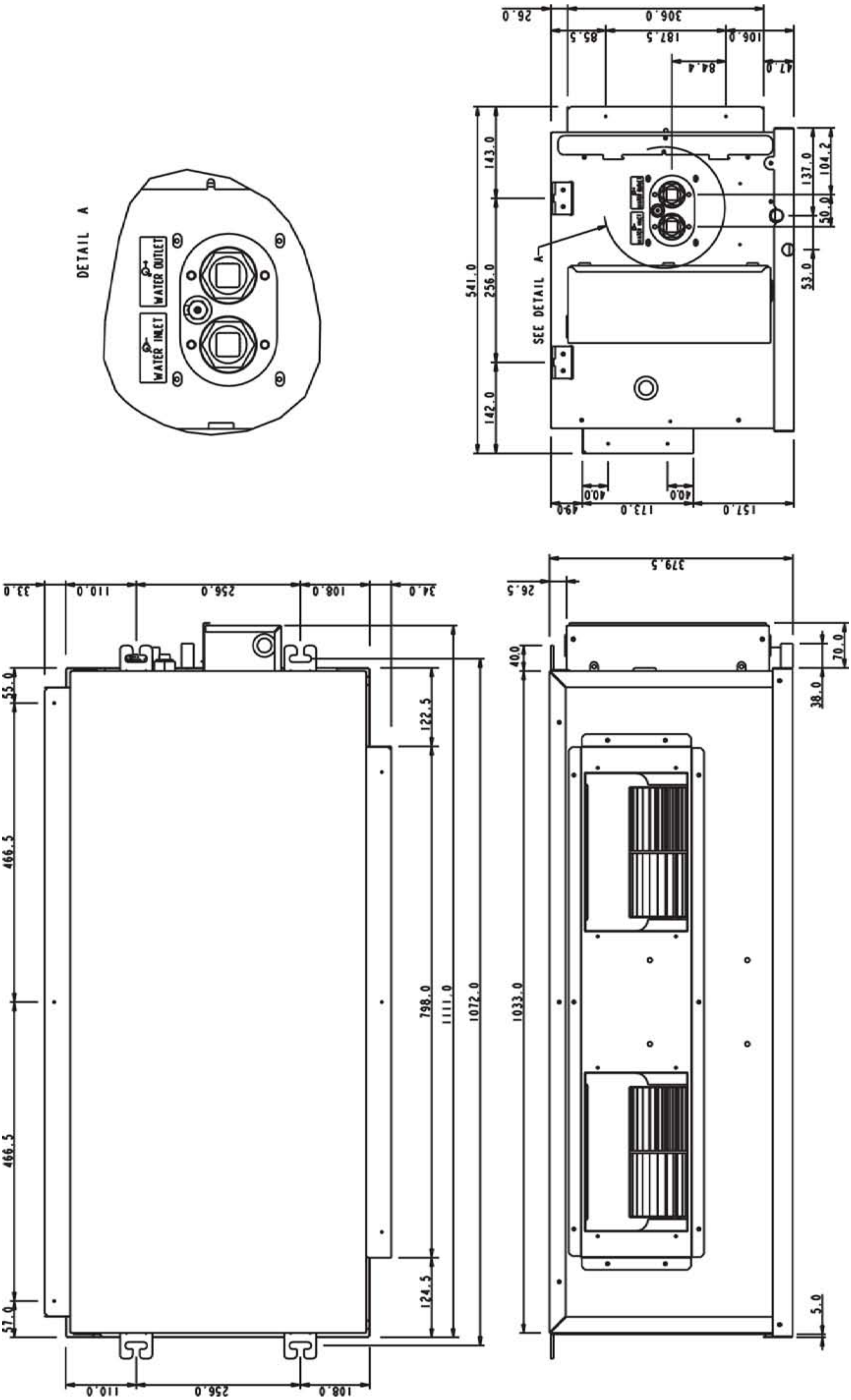
Indoor Unit
Model : MCC 038CW

Dimension in mm



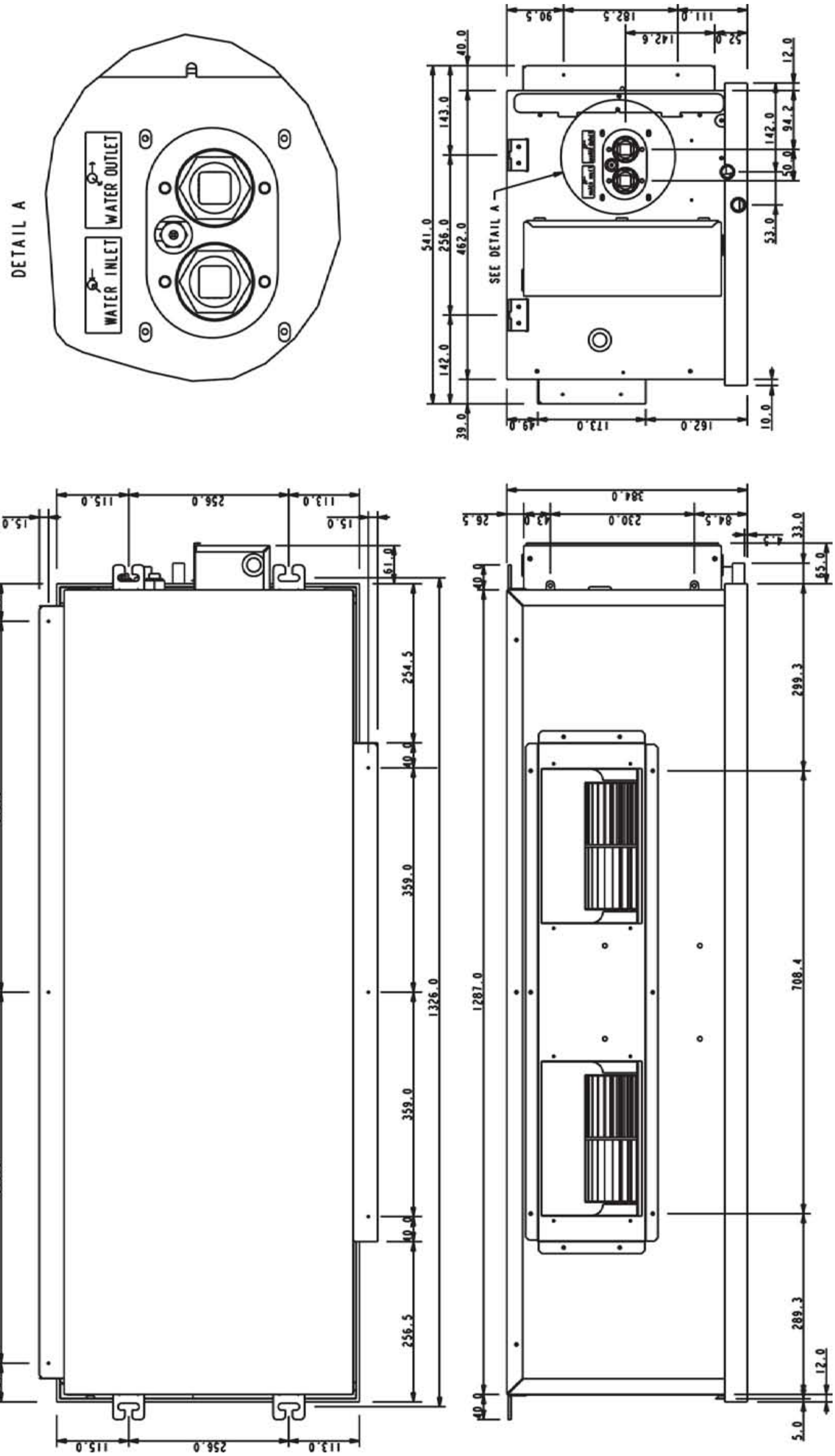
Indoor Unit
Model : MCC 040CW

Dimension in mm

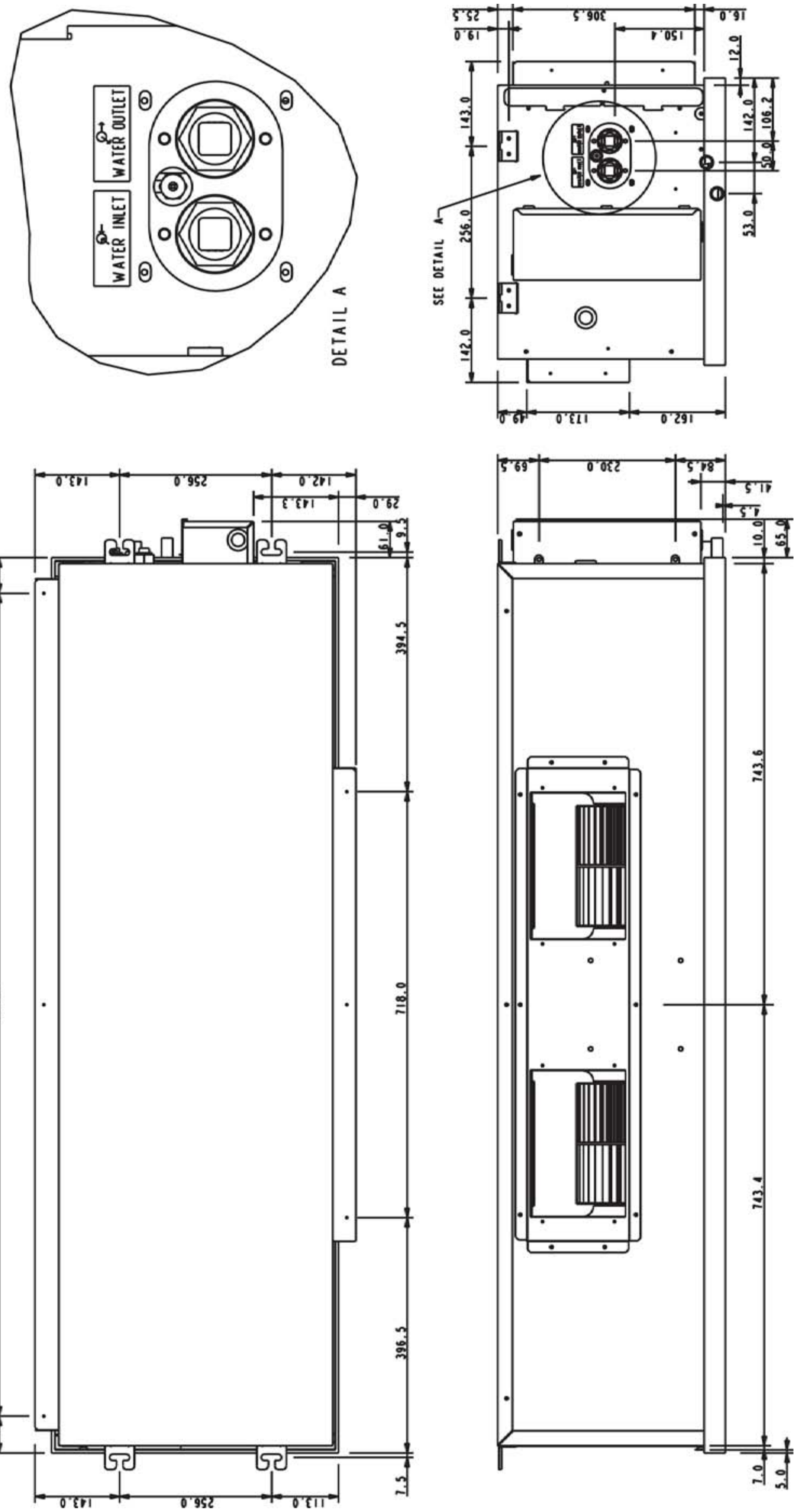


Indoor Unit
Model : MCC 050CW

Dimension in mm

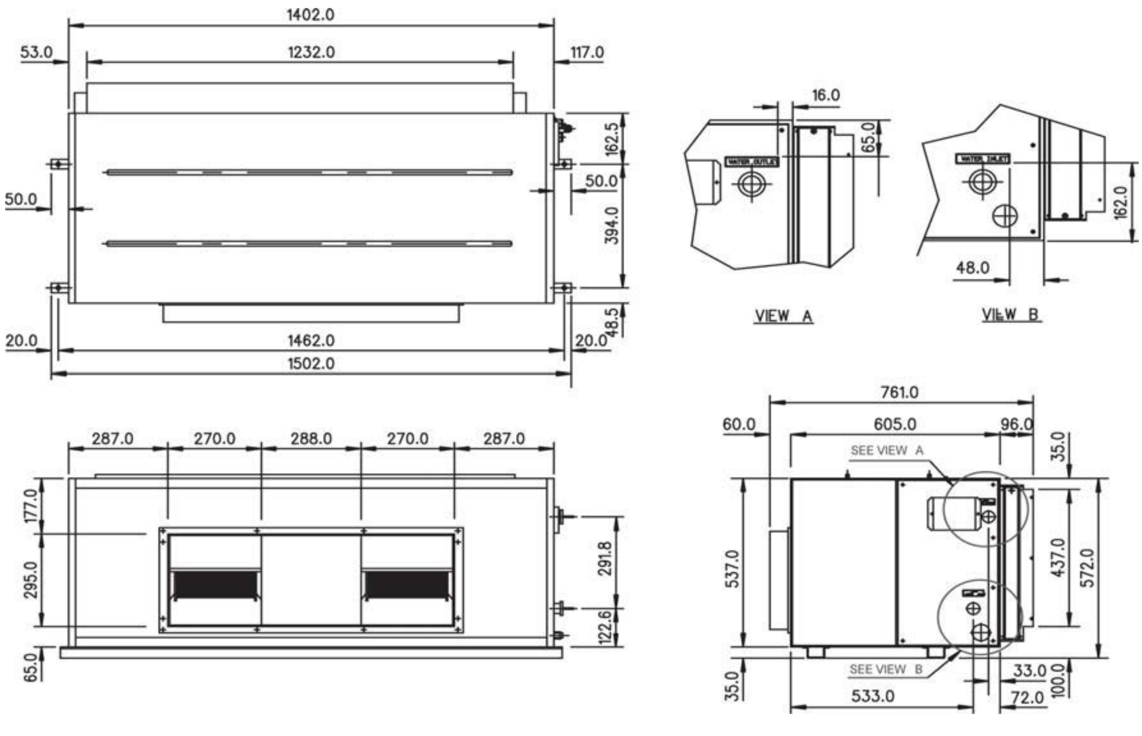


Indoor Unit
Model : MCC 060CW



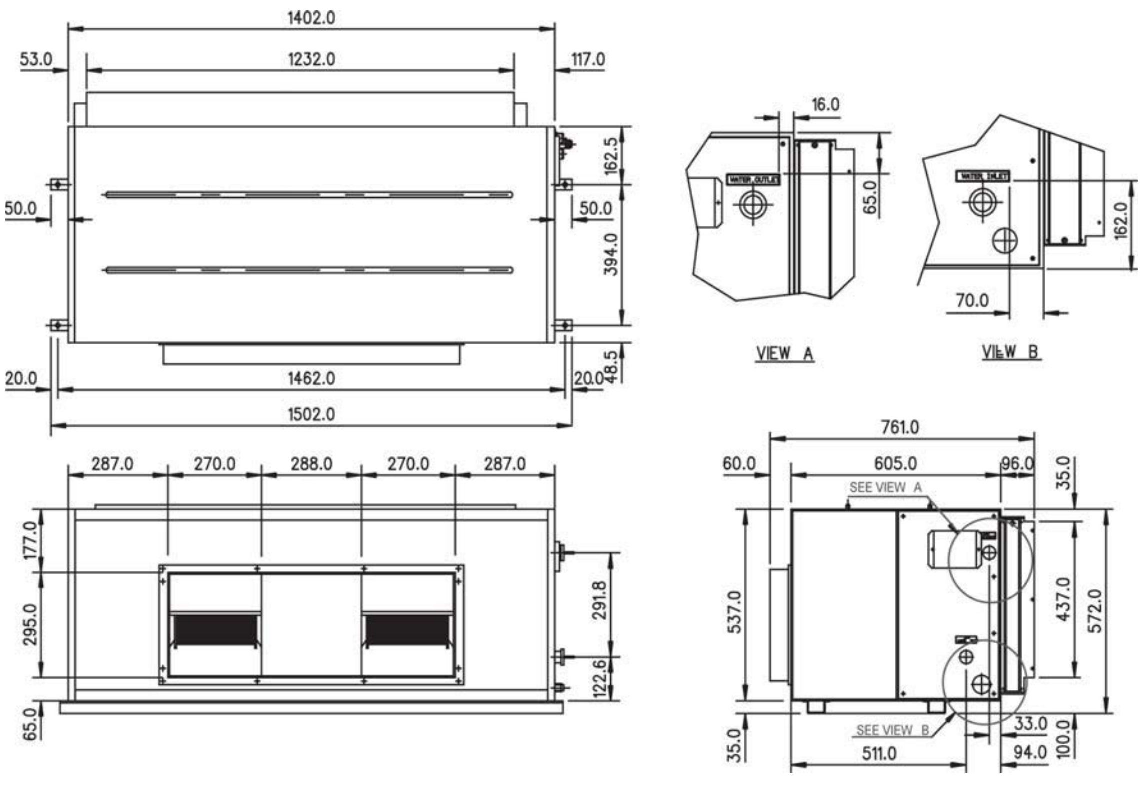
Dimension in mm

Indoor Unit
Model : MDB 075BW



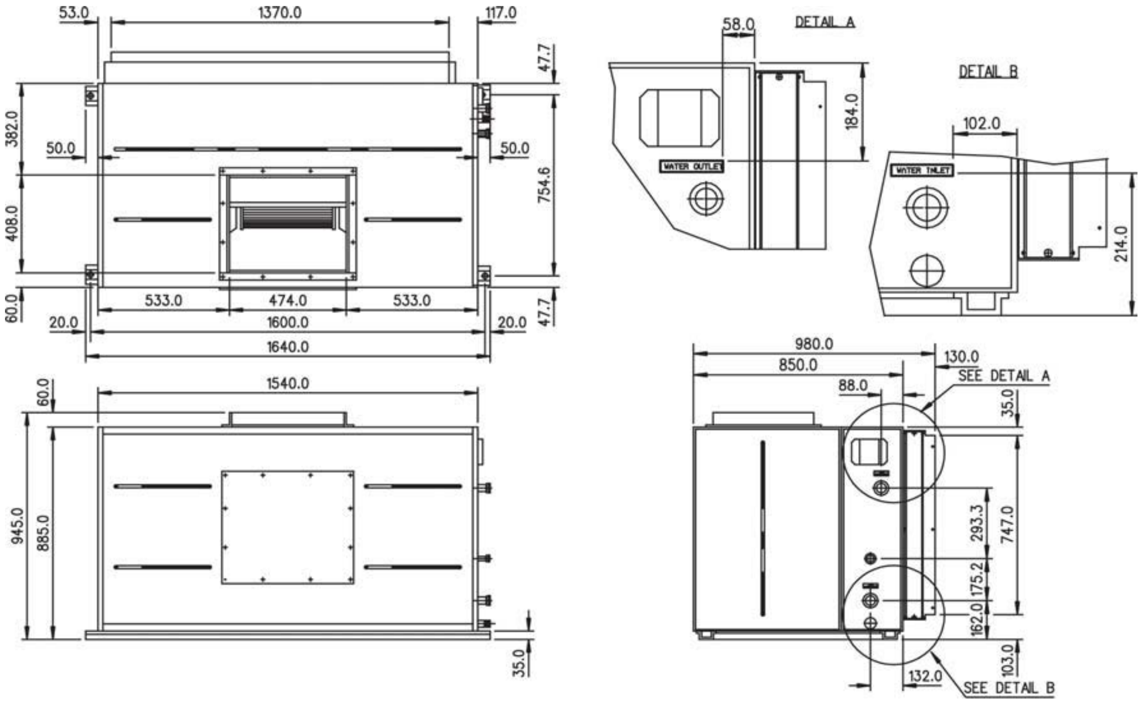
Dimension in mm

Indoor Unit
Model : MDB 100BW



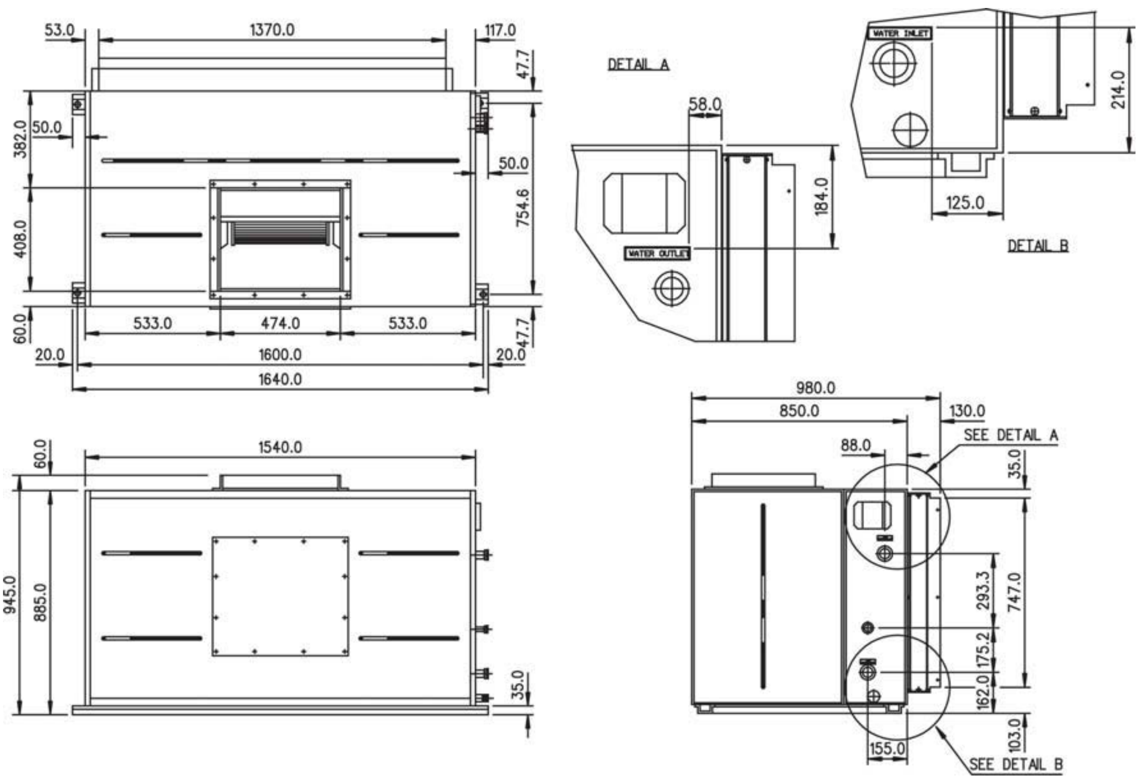
Dimension in mm

Indoor Unit
Model : MDB 125BW (VERTICAL AIR DISCHARGE, RIGHT PIPING)



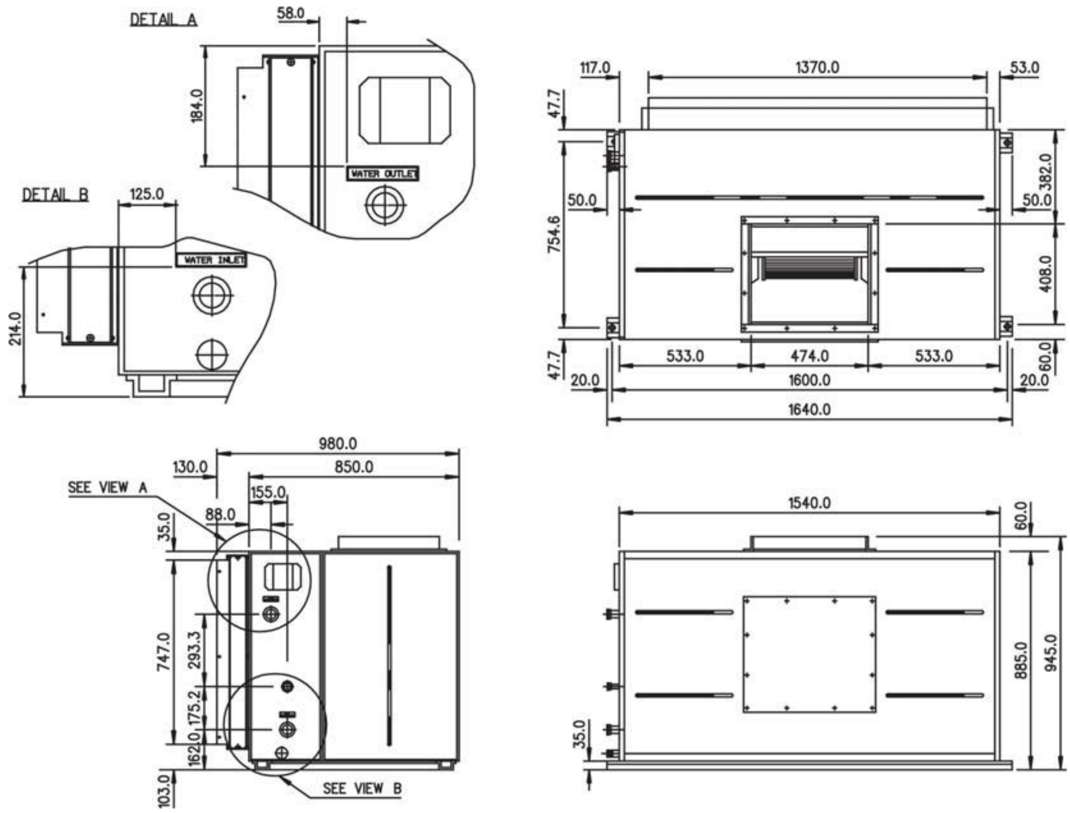
Dimension in mm

Indoor Unit
Model : MDB 150BW (VERTICAL AIR DISCHARGE, RIGHT PIPING)



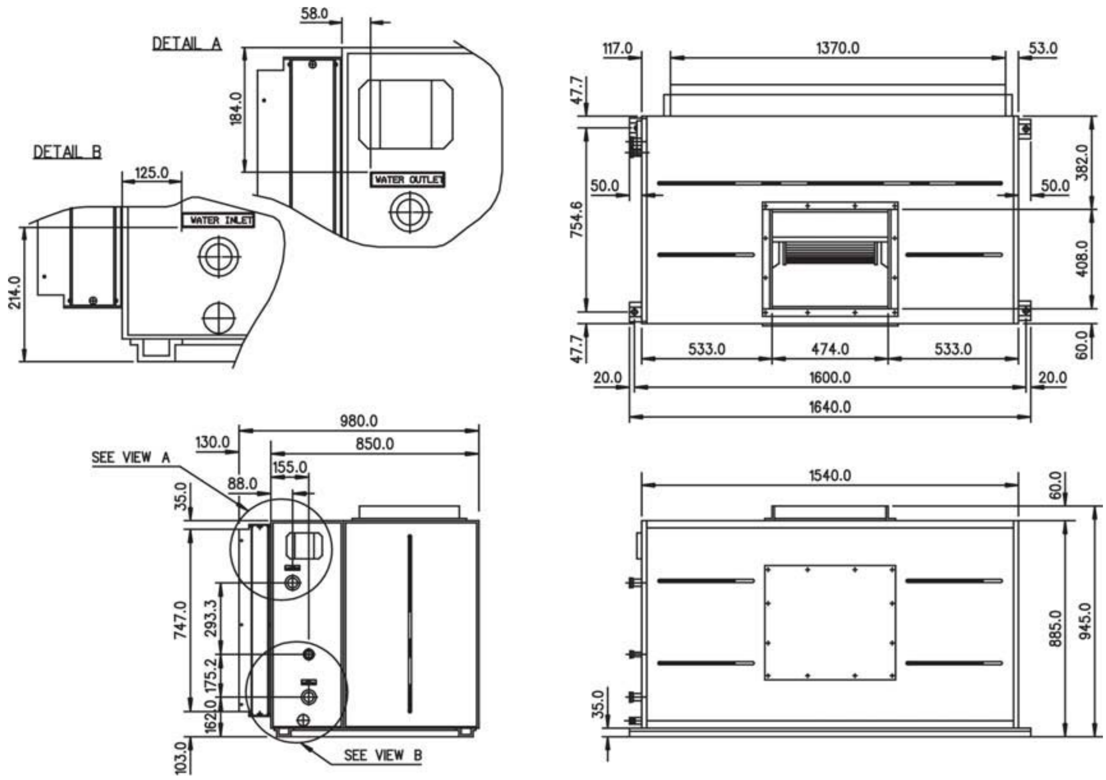
Dimension in mm

Indoor Unit
Model : MDB 125BW (VERTICAL AIR DISCHARGE, LEFT PIPING)



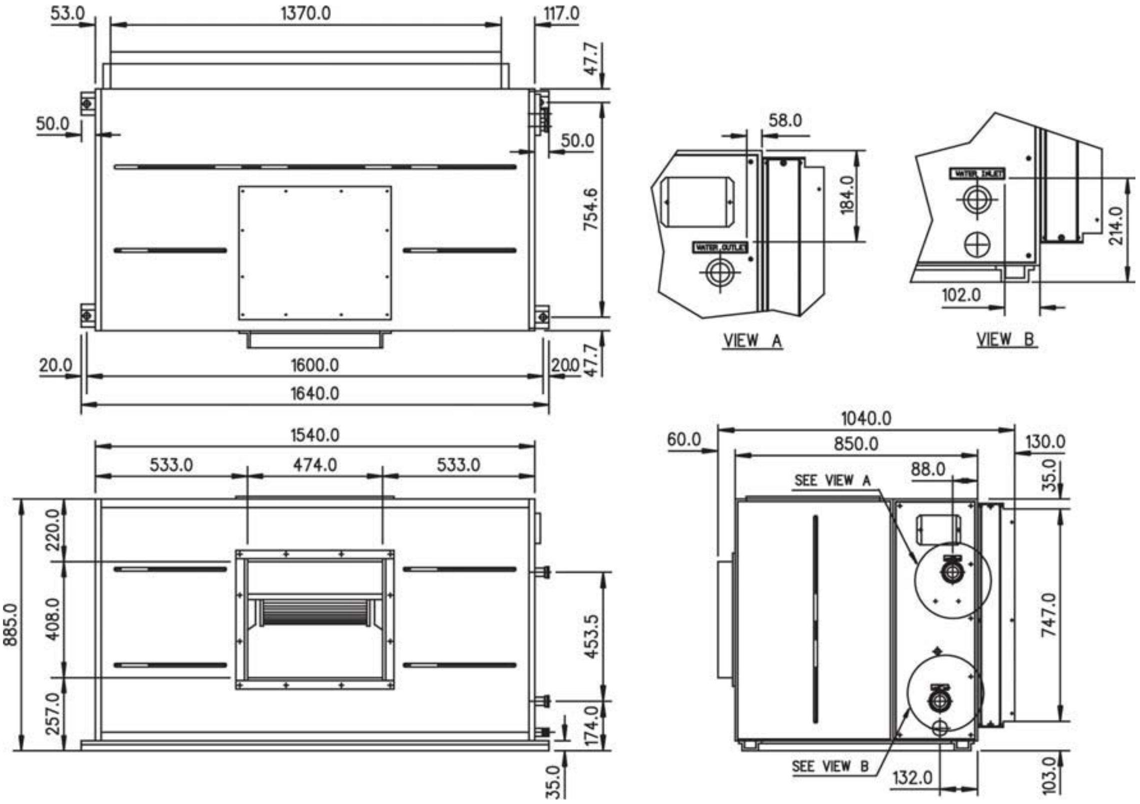
Dimension in mm

Indoor Unit
Model : MDB 150BW (VERTICAL AIR DISCHARGE, LEFT PIPING)



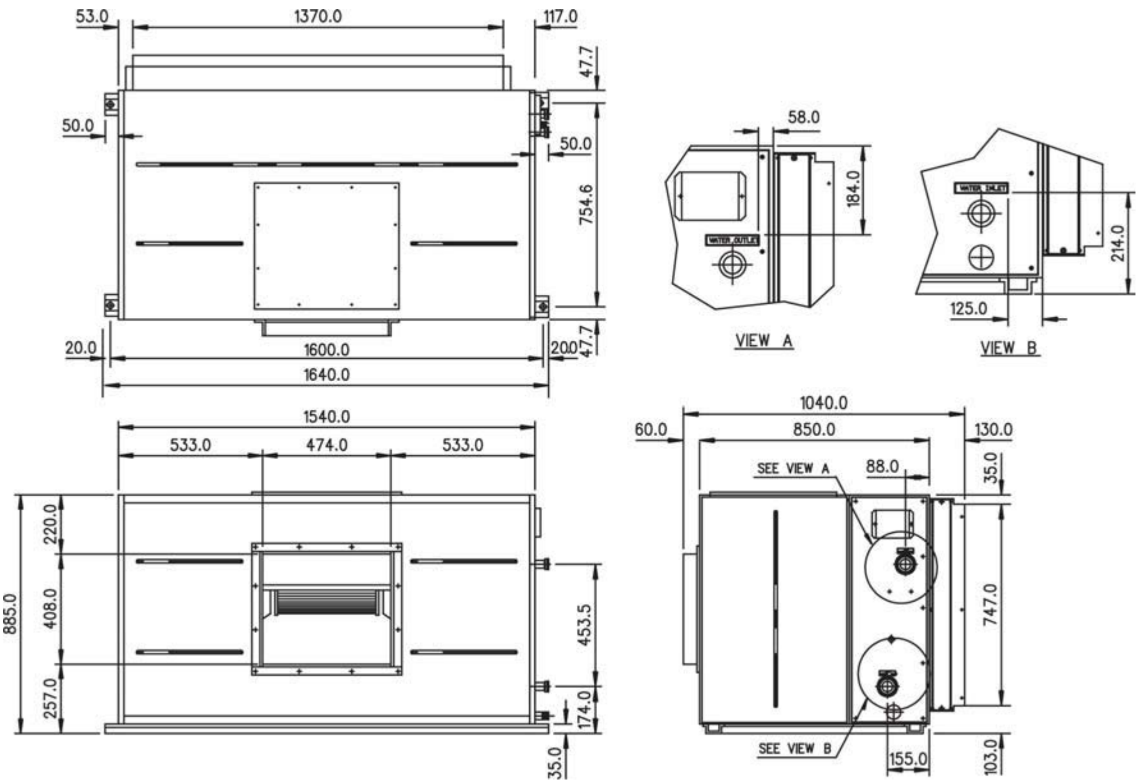
Dimension in mm

Indoor Unit
Model : MDB 125BW (HORIZONTAL AIR DISCHARGE, RIGHT PIPING)



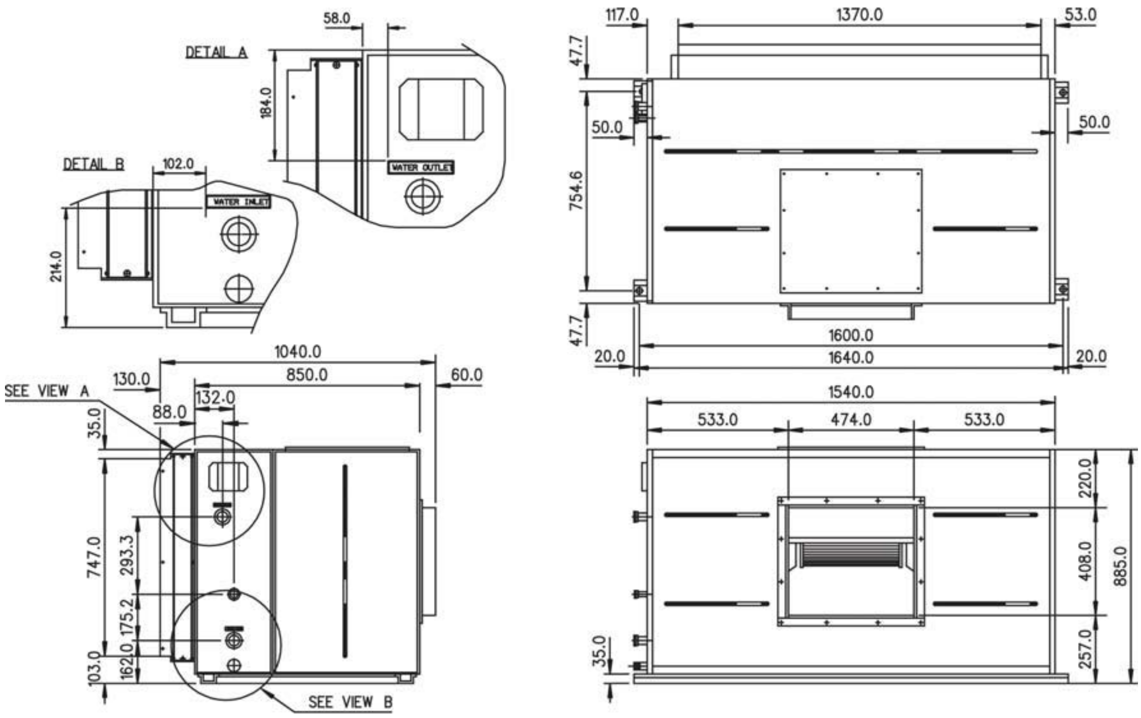
Dimension in mm

Indoor Unit
Model : MDB 150BW (HORIZONTAL AIR DISCHARGE, RIGHT PIPING)



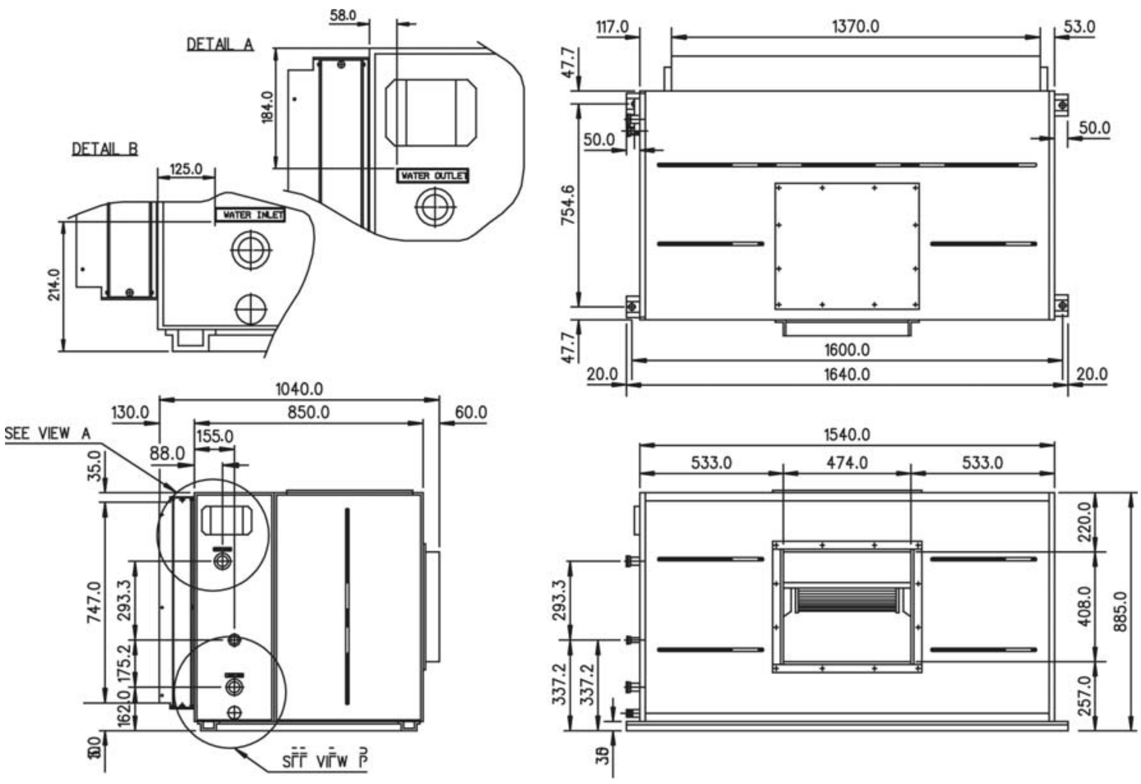
Dimension in mm

Indoor Unit
Model : MDB 125BW (HORIZONTAL AIR DISCHARGE, LEFT PIPING)



Dimension in mm

Indoor Unit
Model : MDB 150BW (HORIZONTAL AIR DISCHARGE, LEFT PIPING)



Dimension in mm

Electrical Data

MWM-GW

MODEL			MWM007GW	MWM010GW
FAN MOTOR	INSULATION GRADE		E	E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	24	25
	RATED RUNNING CURRENT	A	0.11	0.11
	MOTOR OUTPUT	W	8	9
	POLES		4	4

MODEL			MWM015GW	MWM020GW
FAN MOTOR	INSULATION GRADE		E	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	29	66
	RATED RUNNING CURRENT	A	0.13	0.29
	MOTOR OUTPUT	W	13	25
	POLES		4	4

MODEL			MWM025GW	MWM301W
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	69	74
	RATED RUNNING CURRENT	A	0.30	0.32
	MOTOR OUTPUT	W	38	40
	POLES		4	4

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151.

MCK-AW

MODEL			MCK020AW	MCK025AW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	127	151
	RATED RUNNING CURRENT	A	0.52	0.64
	MOTOR OUTPUT	W	35	45
	POLES		8	8

MODEL			MCK030AW	MCK040AW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	164	192
	RATED RUNNING CURRENT	A	0.68	0.79
	MOTOR OUTPUT	W	60	83
	POLES		8	8

MODEL			MCK050AW
FAN MOTOR	INSULATION GRADE		B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	253
	RATED RUNNING CURRENT	A	1.06
	MOTOR OUTPUT	W	120
	POLES		8

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MCK-AWH

MODEL			MCK020AWH	MCK025AWH
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	122	138
	RATED RUNNING CURRENT	A	0.53	0.61
	MOTOR OUTPUT	W	35	45
	POLES		8	8

MODEL			MCK030AWH	MCK040AWH
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	153	184
	RATED RUNNING CURRENT	A	0.67	0.80
	MOTOR OUTPUT	W	60	83
	POLES		8	8

MODEL			MCK050AWH
FAN MOTOR	INSULATION GRADE		B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	232
	RATED RUNNING CURRENT	A	1.02
	MOTOR OUTPUT	W	120
	POLES		8

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MCK-CW

MODEL			MCK010CW	MCK015CW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	51	75
	RATED RUNNING CURRENT	A	0.22	0.30
	MOTOR OUTPUT	W	16	18
	POLES		6	6

MODEL			MCK020CW
FAN MOTOR	INSULATION GRADE		B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	78
	RATED RUNNING CURRENT	A	0.34
	MOTOR OUTPUT	W	22
	POLES		6

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MCM-DW

MODEL			MCM020DW	MCM025DW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	96	130
	RATED RUNNING CURRENT	A	0.41	0.54
	MOTOR OUTPUT	W	40	65
	POLES		4	4

MODEL			MCM030DW
FAN MOTOR	INSULATION GRADE		B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	132
	RATED RUNNING CURRENT	A	0.57
	MOTOR OUTPUT	W	65
	POLES		4

MODEL			MCM040DW	MCM050DW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	240	240
	RATED RUNNING CURRENT	A	0.98	1.03
	MOTOR OUTPUT	W	100	120
	POLES		4	4

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MCM-CBW

MODEL			MCM007CBW	MCM010CBW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	49	50
	RATED RUNNING CURRENT	A	0.22	0.22
	MOTOR OUTPUT	W	47	52
	POLES		4	4

MODEL			MCM015CBW
FAN MOTOR	INSULATION GRADE		B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	81
	RATED RUNNING CURRENT	A	0.35
	MOTOR OUTPUT	W	75
	POLES		4

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MCM-EW

MODEL			MCM015EW	MCM020EW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	101	109
	RATED RUNNING CURRENT	A	0.46	0.49
	MOTOR OUTPUT	W	50	65
	POLES		4	4

MODEL			MCM025EW
FAN MOTOR	INSULATION GRADE		B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50
	RATED INPUT POWER	W	119
	RATED RUNNING CURRENT	A	0.52
	MOTOR OUTPUT	W	70
	POLES		4

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MCC-CW

MODEL			MCC010CW	MCC015CW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	68	97
	RATED RUNNING CURRENT	A	0.30	0.42
	MOTOR OUTPUT	W	30	50
	POLES		4	4

MODEL			MCC020CW	MCC025CW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	141	165
	RATED RUNNING CURRENT	A	0.64	0.73
	MOTOR OUTPUT	W	80	100
	POLES		4	4

MODEL			MCC028CW	MCC038CW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	150	423
	RATED RUNNING CURRENT	A	0.66	1.81
	MOTOR OUTPUT	W	320	370
	POLES		4	4

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MCC-CW

MODEL			MCC030CW	MCC040CW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	401	448
	RATED RUNNING CURRENT	A	1.87	2.00
	MOTOR OUTPUT	W	320	400
	POLES		4	4

MODEL			MCC050CW	MCC060CW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	510	562
	RATED RUNNING CURRENT	A	2.26	2.47
	MOTOR OUTPUT	W	480	600
	POLES		4	4

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
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MDB-BW

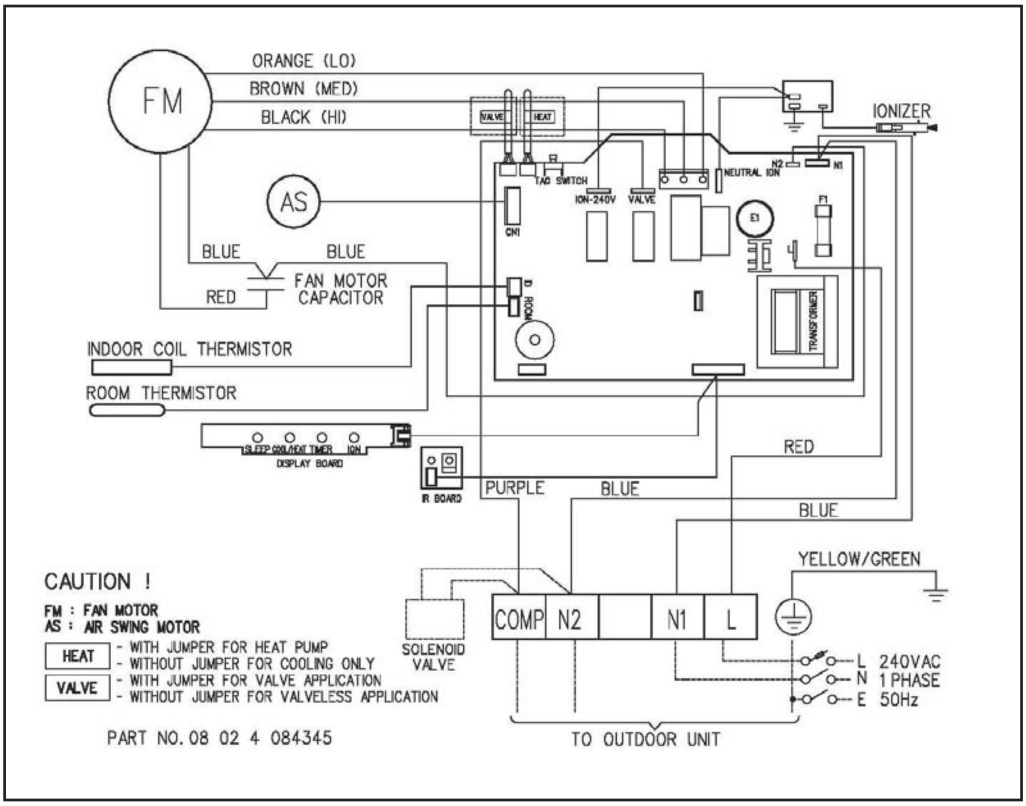
MODEL			MDB075BW	MDB100BW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	220 - 240 / 1 / 50
	RATED INPUT POWER	W	810	1781
	RATED RUNNING CURRENT	A	3.70	7.68
	MOTOR OUTPUT	W	375	500
	POLES		6	4

MODEL			MDB125BW	MDB150BW
FAN MOTOR	INSULATION GRADE		B	B
	POWER SOURCE	V/Ph/Hz	380 - 415 / 3 / 50	380 - 415 / 3 / 50
	RATED INPUT POWER	W	1550	1620
	RATED RUNNING CURRENT	A	2.95	3.10
	MOTOR OUTPUT	W	1500	1500
	POLES		4	4

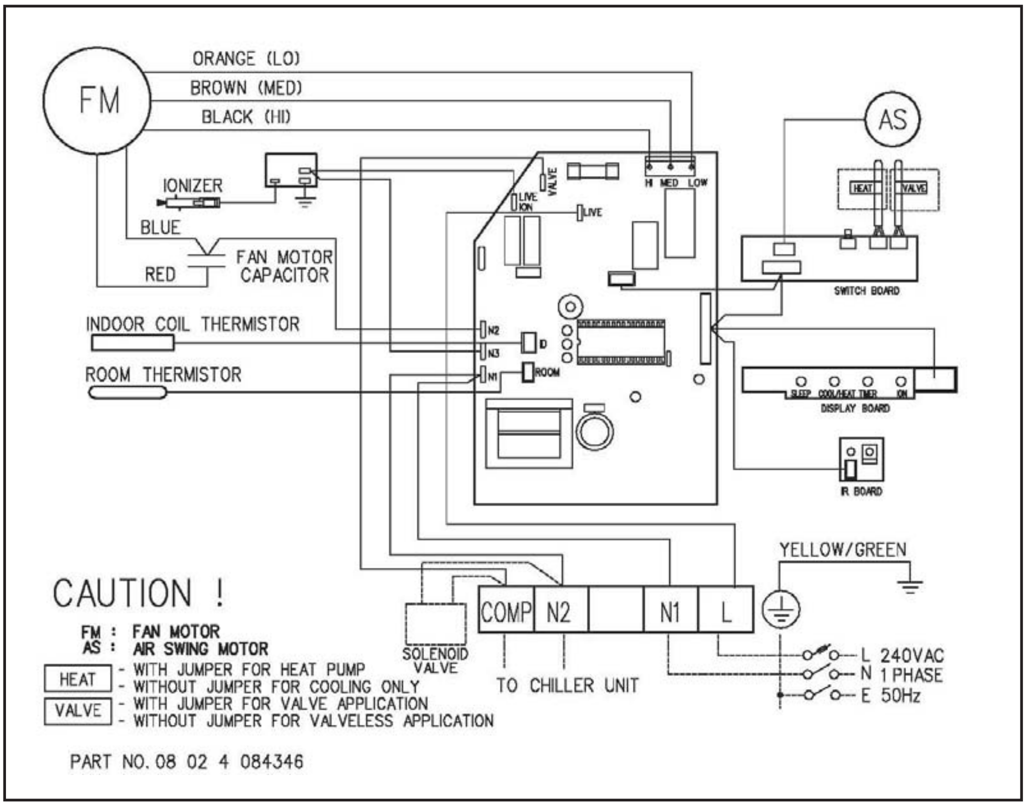
1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 5151.

Wiring Diagrams

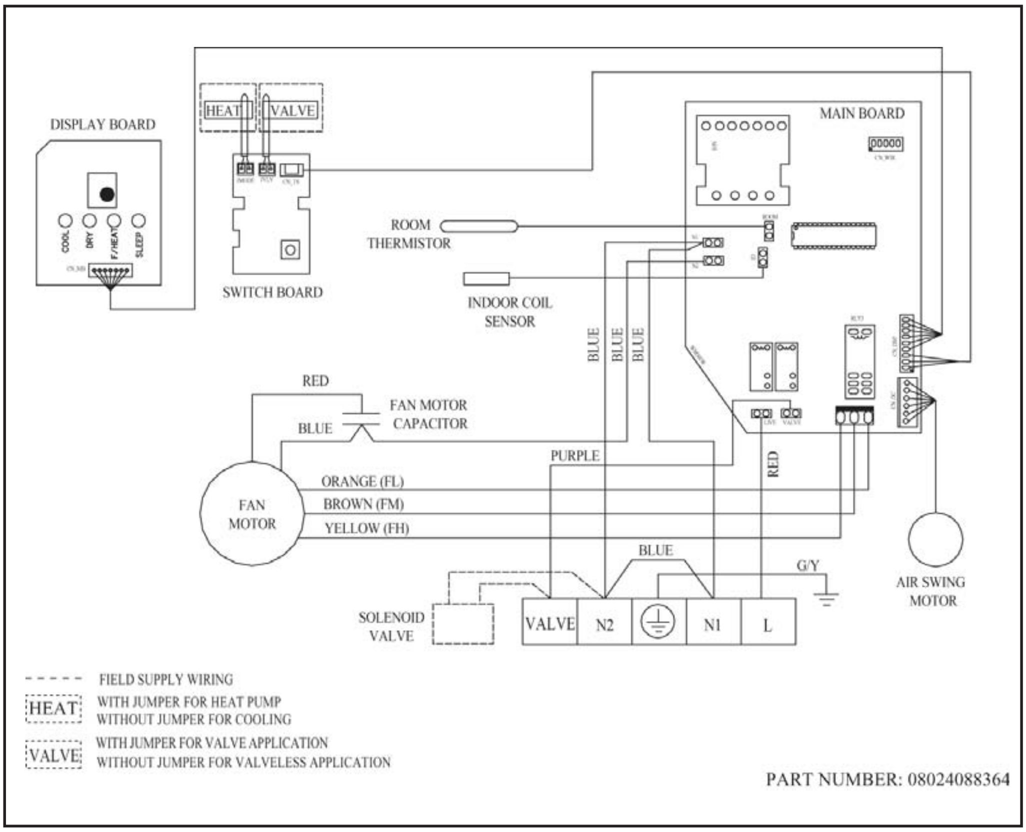
Model : MWM 007 / 010 / 015GW



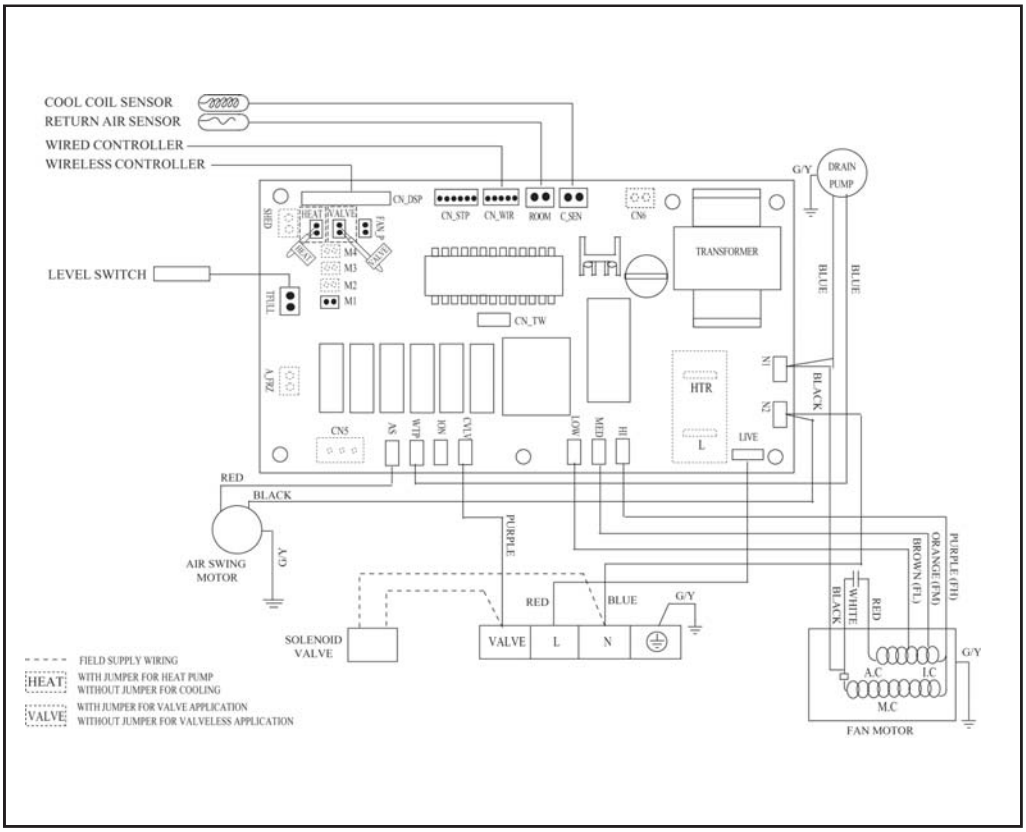
Model : MWM 020 / 025 GW



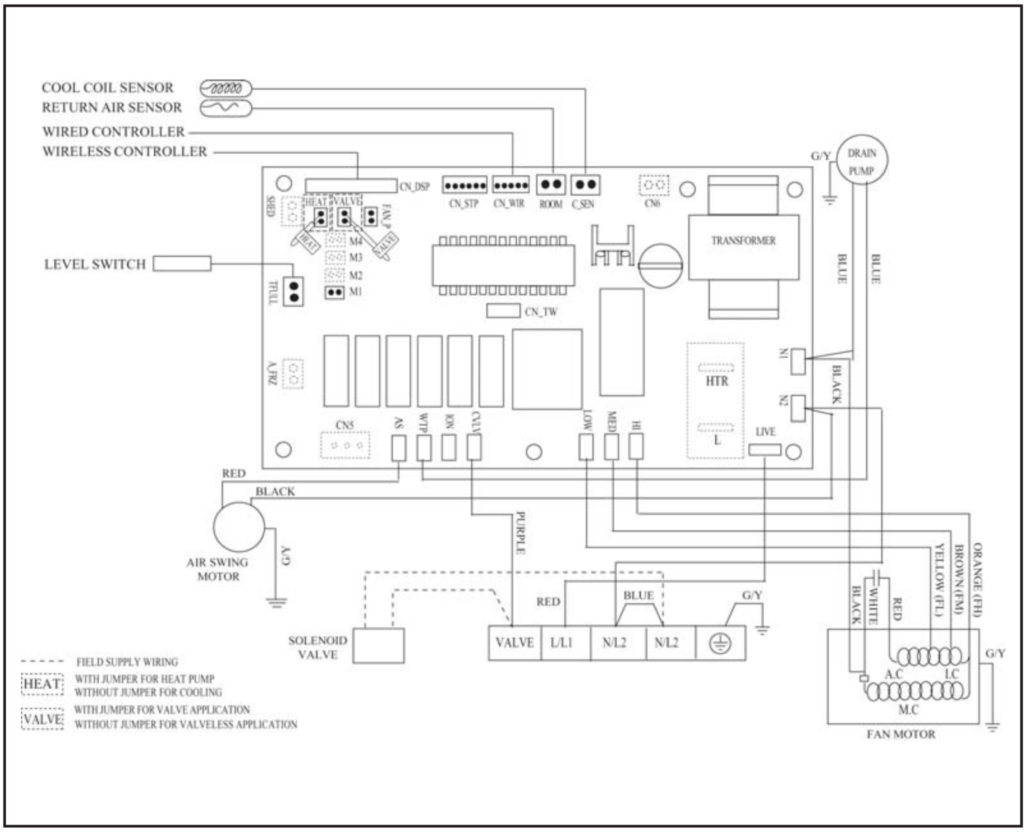
Model : MWM 301W



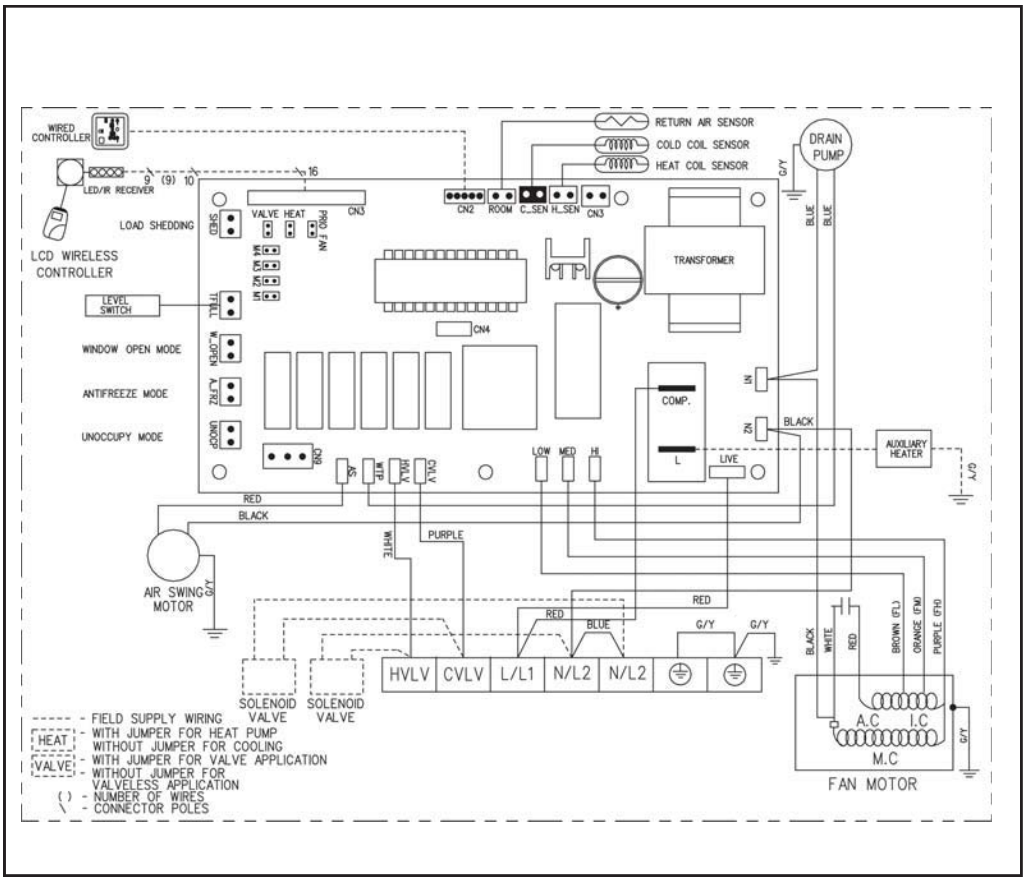
Model : MCK 020 / 025 / 030 / 040 / 050AW



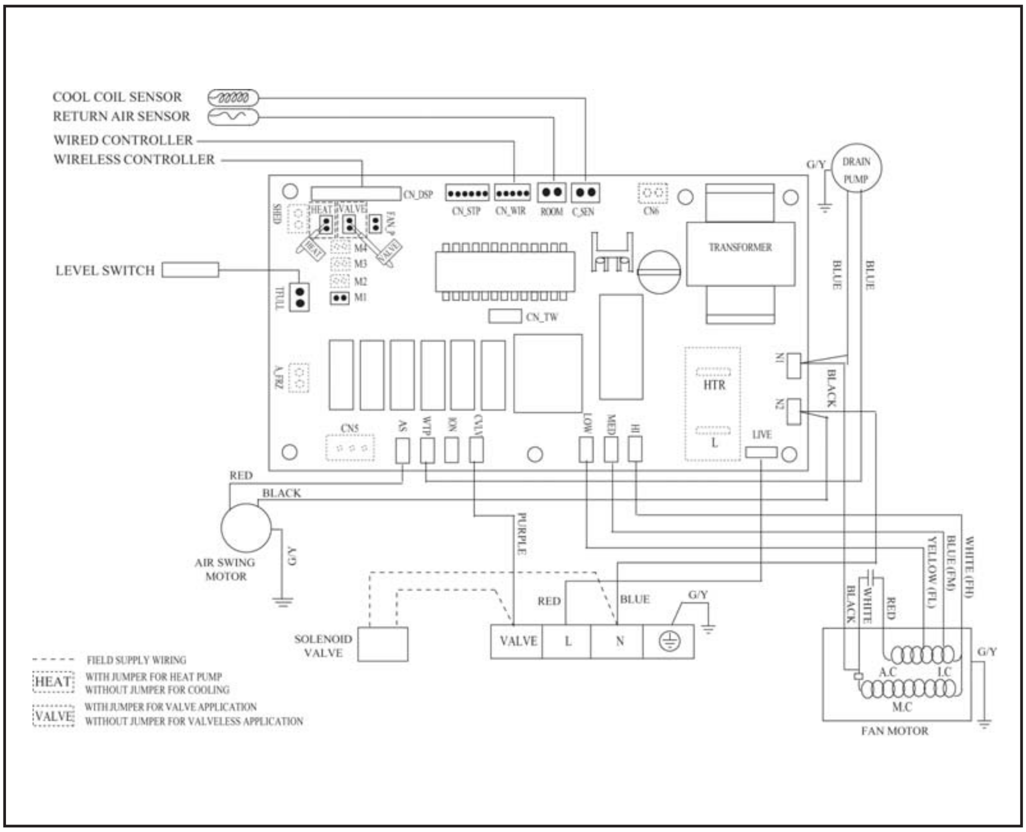
Model : MCK 010 / 015 / 020CW



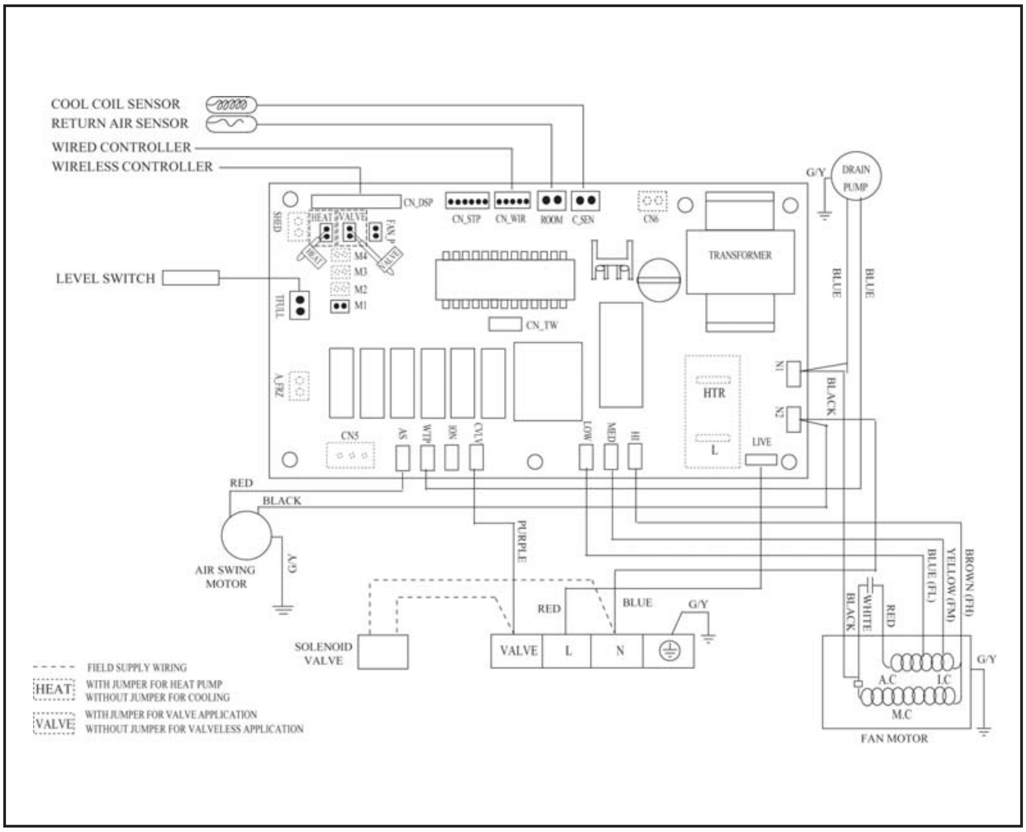
Model : MCK 020 / 025 / 030 / 040 / 050 AWH



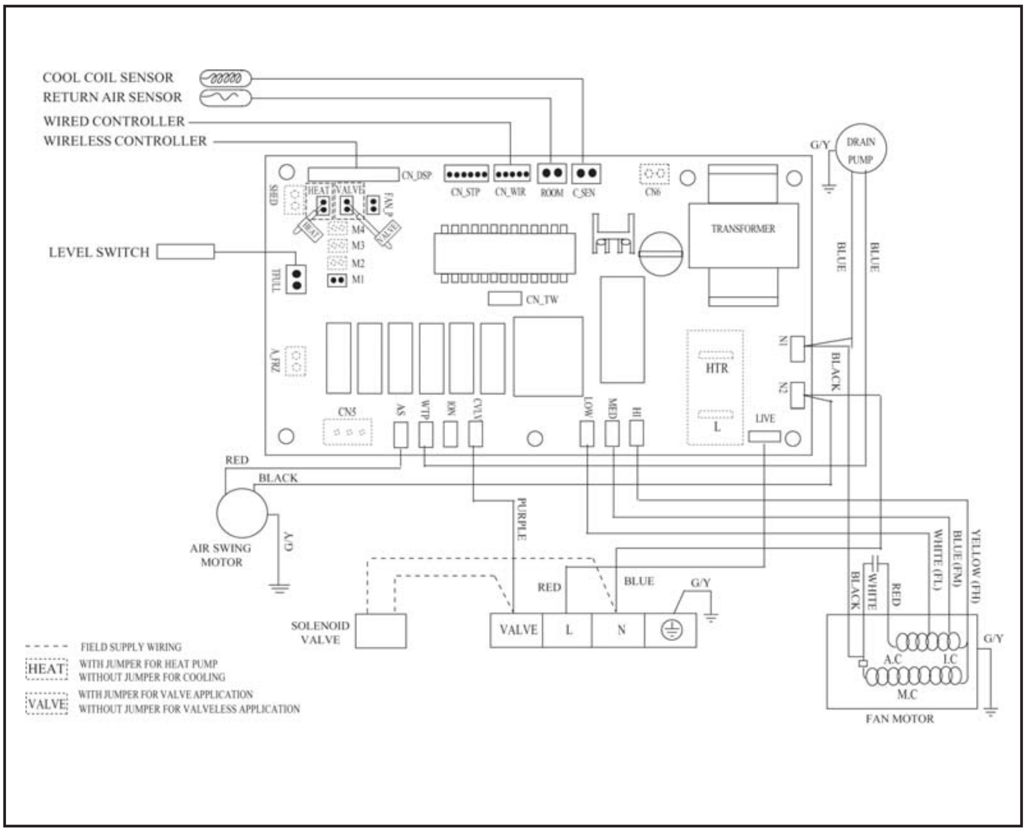
Model : MCM 020 / 025 / 030 / 040 / 050DW



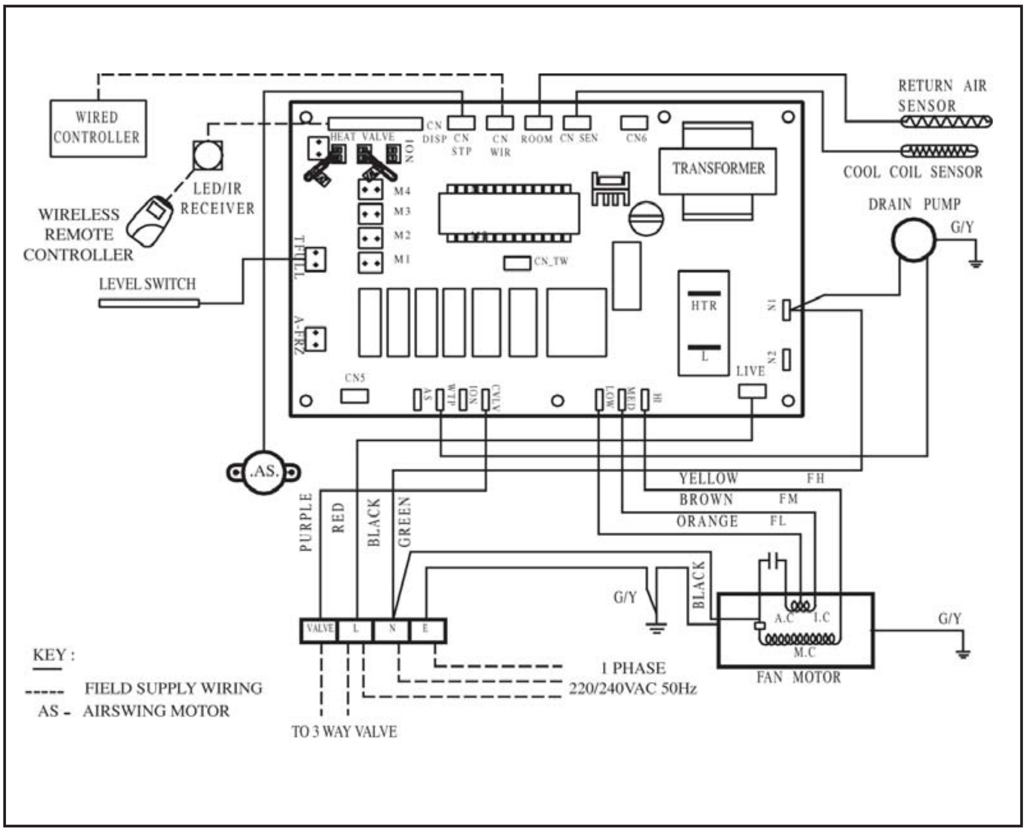
Model : MCM 007 / 015 CBW



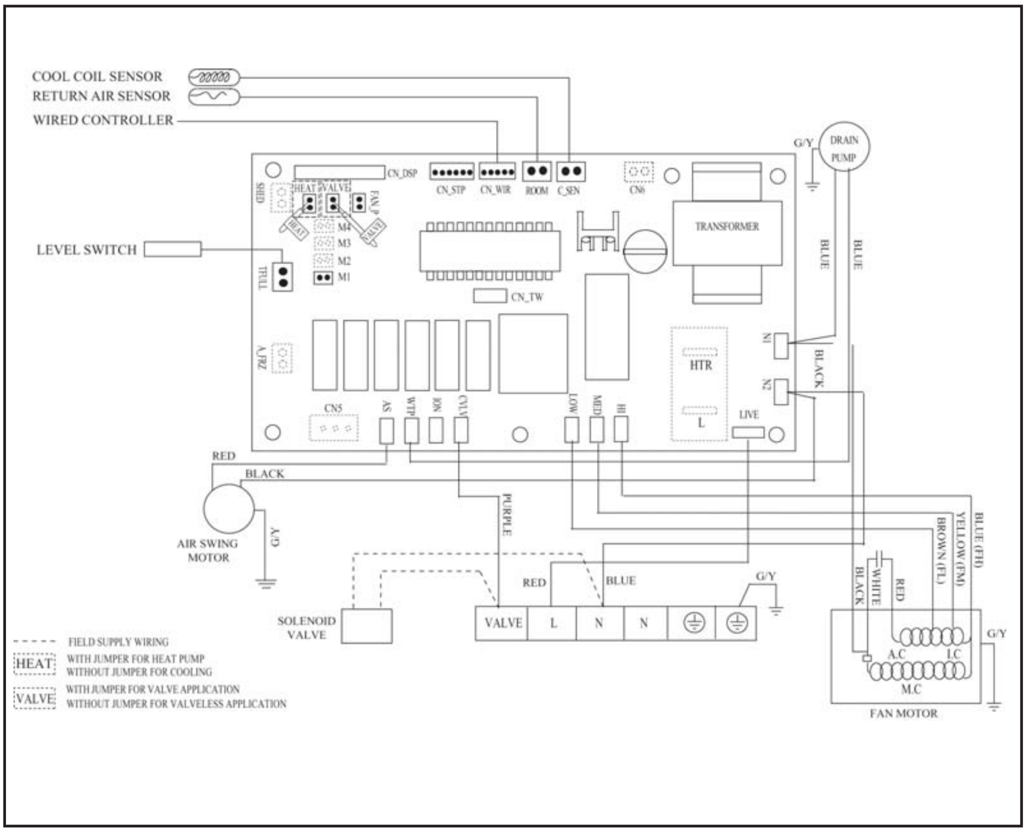
Model : MCM 010 CBW



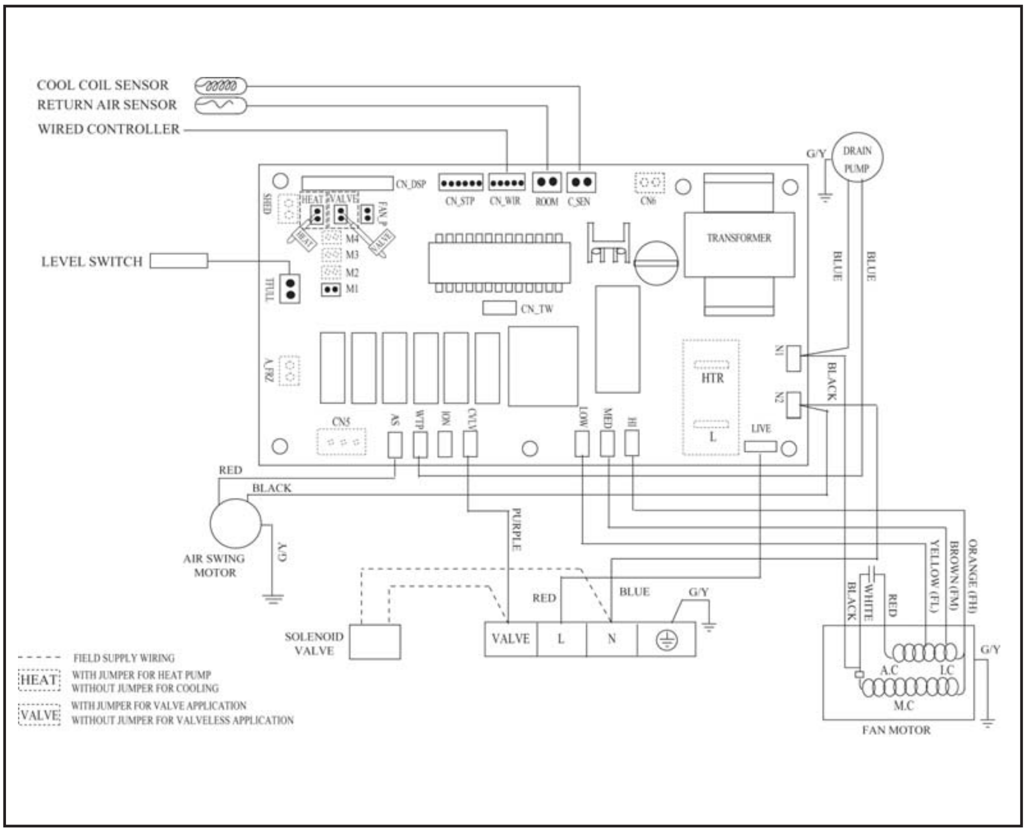
Model : MCM 015 / 020 / 025 EW



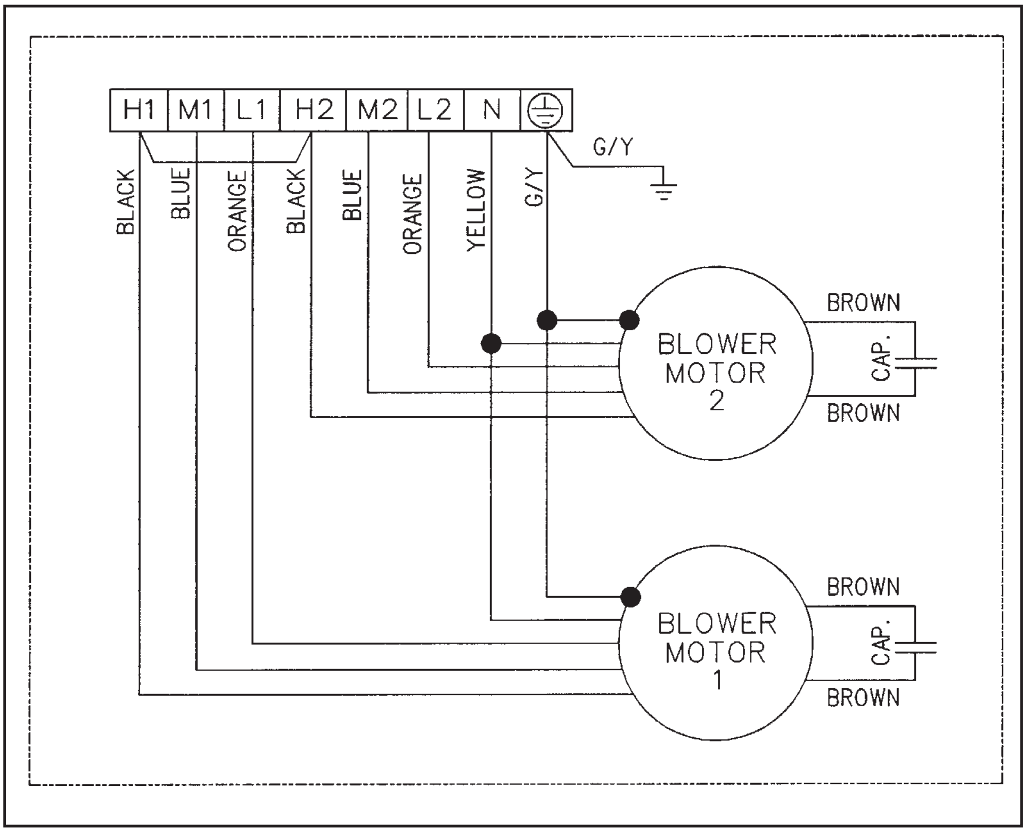
Model : MCC 010 / 015 / 020 / 025CW



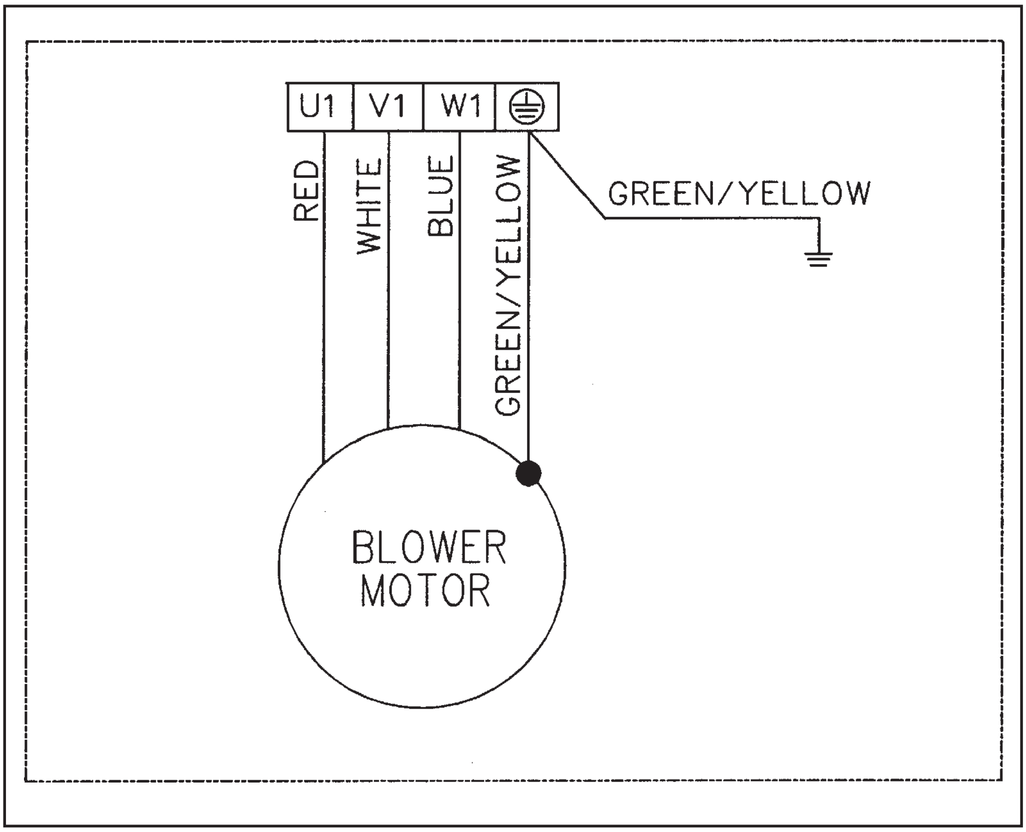
Model : MCC 028 / 030 / 038 / 040 / 050 / 060CW



Model : MDB 075 / 100BW - Without Controller



Model : MDB 125 / 150BW - Without Controller



Service and Maintenance

Items	Maintenance procedures	Period
Indoor air filter	1. Remove any dust adhered on the filter by using a vacuum cleaner or wash in lukewarm water (below 40°C) with neutral cleaning detergent. 2. Rinse well and dry the filter before placing it back onto the unit. 3. Do not use gasoline, volatile substances or chemical to clean the filter.	At least once every 4 weeks. More frequently if necessary.
Indoor unit	1. Clean any dust or dust on the grille or panel by wiping it using soft cloth soaked in lukewarm water (below 40°C) with neutral cleaning detergent. 2. Do not use gasoline, volatile substances or chemical to clean the indoor unit.	At least once every 4 weeks. More frequently if necessary.
Condense drain pan & pipe	Check its cleanliness and clean it if necessary.	Every 3 months
Indoor fan	Check for any abnormal noise.	When necessary.
Indoor coil	1. Check and remove any dirt clogged between fins. 2. Check and remove any obstacles that hinder air flowing into and out of the indoor unit.	Every month.
Power supply	1. Check the voltage and current of the indoor unit. 2. Check the electrical wiring for any faulty contacts caused by loose connections, foreign matters, etc. Tighten the wires onto the terminal block if necessary.	Every 2 months.
Fan motor oil	All motors are pre-lubricated and sealed at factory.	No maintenance required.

Troubleshooting

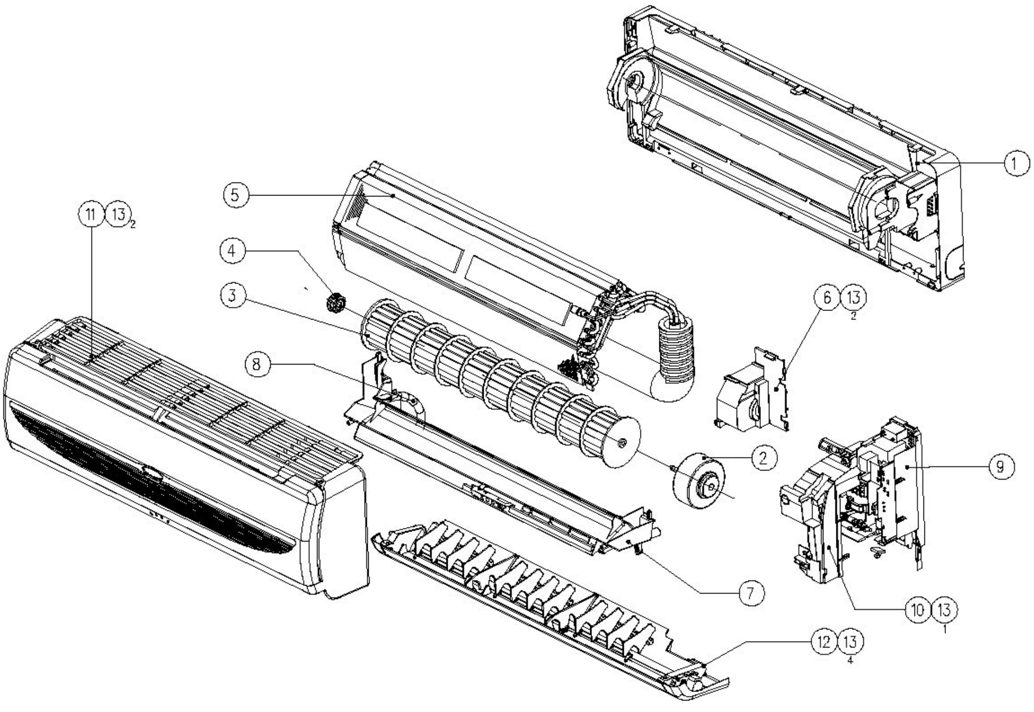
When any malfunction of the air conditioner unit is noted, immediately switch off the power supply to the unit. Check for the following fault conditions and causes for some simple troubleshooting tips.

Fault	Causes
The air conditioner unit does not operate.	• Power failure, or the fuse blown and need to be replaced. • The power plug is disconnected. • If the fault persist after all these verifications, please contact the air conditioner unit installer.
The air flow is too low.	• The air filter is dirty. • The doors and windows are opened. • The air suction and discharge are clogged. • The regulated temperature is not high enough.
The remote control display is dim.	• Battery flat. • The batteries are placed incorrectly.
Discharge air flow has bad odor.	• Odors may be caused by cigarettes, smoke particles, perfume etc. which might have adhered onto the coil.
Condensation on the front air grille of the indoor unit.	• This is caused by air humidity after an extended long period of operation. • The set temperature is too low, increase the temperature setting and operate the unit at high fan speed.
Water flowing out from the air conditioner unit.	• Check the condensate evacuation.

If the fault persist, pleasea call your local dealer / serviceman.

Exploded View and Parts List

Model : MWM 007GW



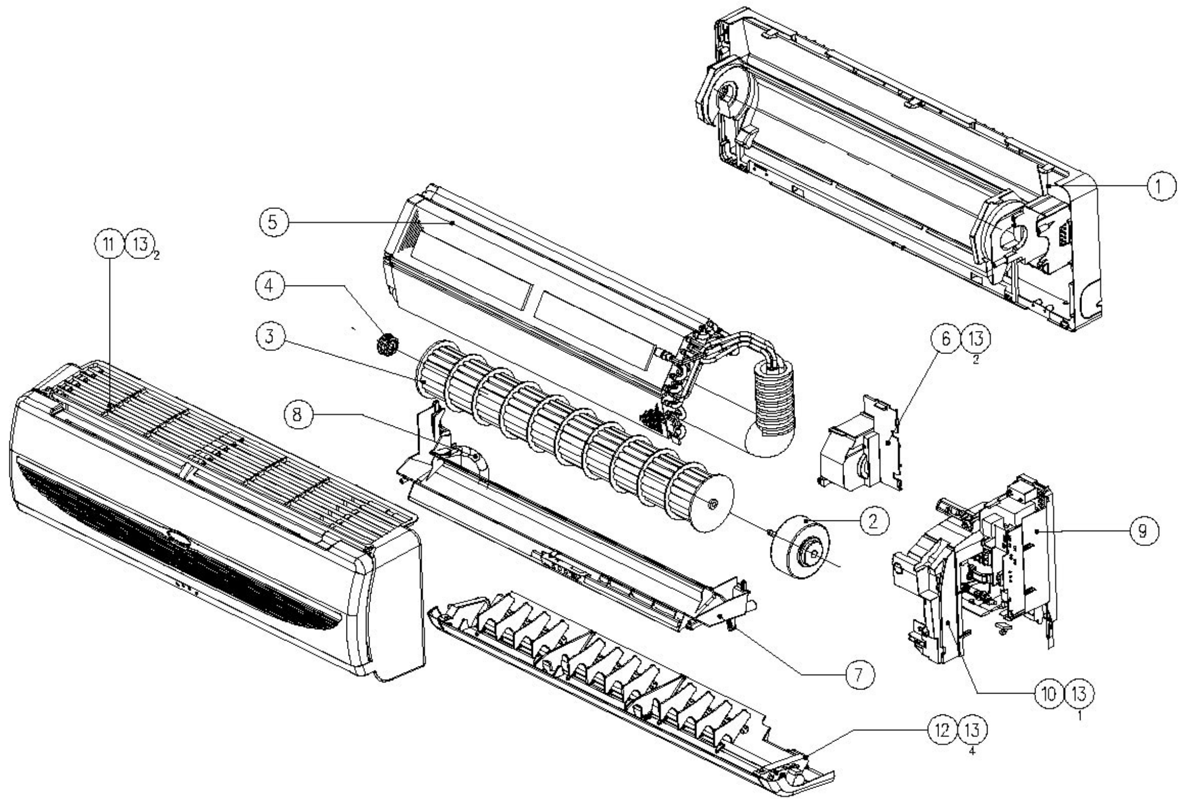
No	Description	Part No
1	Assy., Chassis	R50124064147
2	Fan Motor	R03034064425
3	Cross Flow Fan	R03029019462
4	Fan, Bush	R11014029514
5	Assy., Coil	R50024083241
6	Piping Clamp\	R12014060544
7	Assy., Drain Pan	R50124088185
8	Assy., Drain Hose	R10024018204
9	Assy., Control Box	R50044084344
10	Assy., Control Box Cover	R50124083506
11	Assy. Front Cover	R50124084805
12	Assy., Air Discharge Housing	R50124085606

Parts Not in Diagram

No	Description	Part No
	Filter	R12014062320
	G11 Handset (Cooling)	R04089065334
	G11 Handset (Heat Pump)	R04089026987
	Assy, Mounting Plate	R50014061333
	Motor, Air Swing	R03039021375
	Filter, Nanosliver (With Frame)	R12014084996
	Filter, Nanovis (With Frame)	R12014084997
	Service Panel	R12014060547
	W2 Control Module	R04084085118
	Assy, Negative Ionizer Bracket	R50044064590
	Louver Top	R12014085590
	Louver Bottom	R12014085591

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MWM 010 / 015 GW



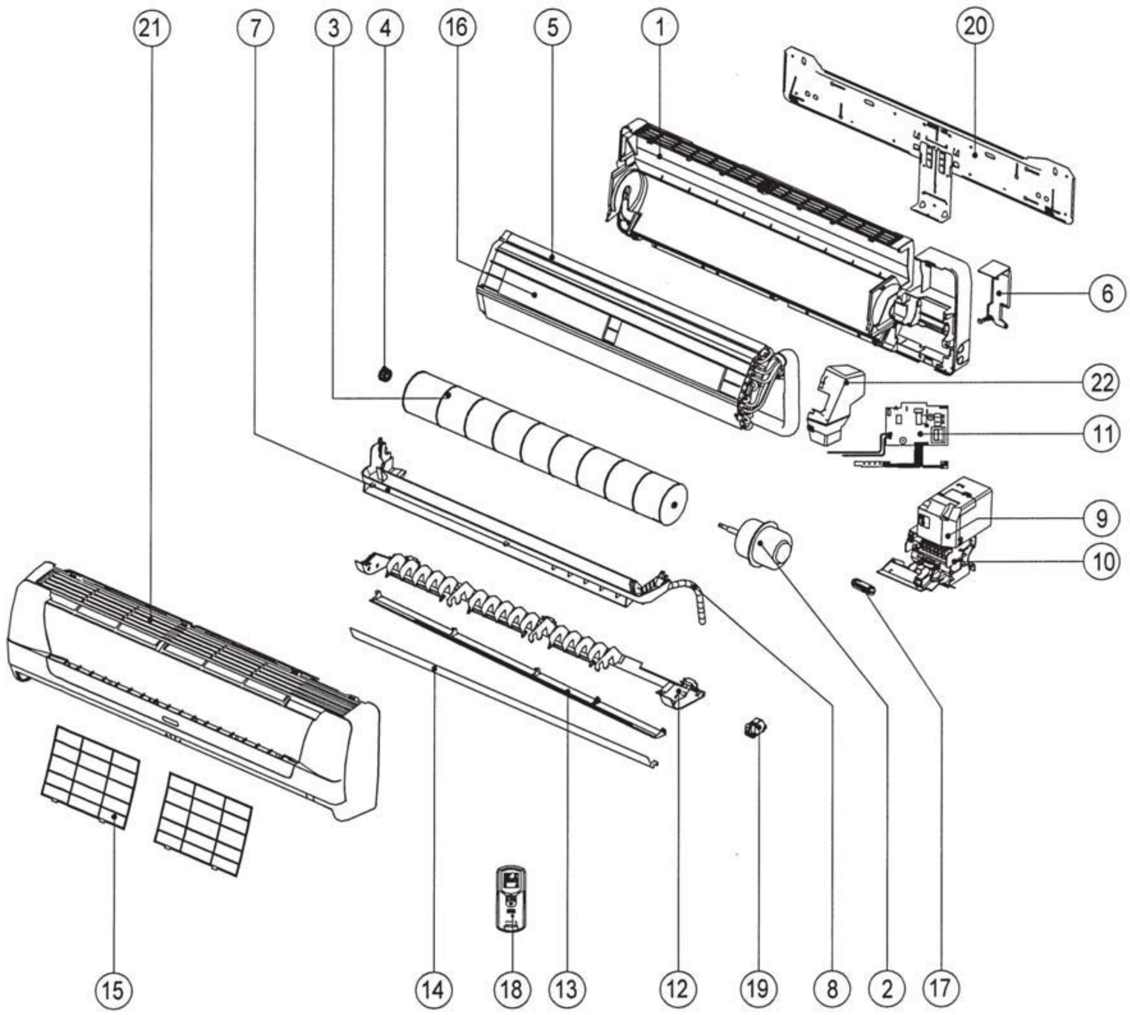
No	Description	Part No
1	Assy., Chassis	R50124064151
2	Fan Motor	
	MWM010GW	R03034071487
	MWM015GW	R03034064426
3	Cross Flow Fan	R03029019461
4	Fan, Bush	R11014029514
5	Assy., Coil	R50024082590
6	Piping Clamp\	R12014060544
7	Assy., Drain Pan	R50124088186
8	Assy., Drain Hose	R10024018204
9	Assy., Control Box	R50044084344
10	Assy., Control Box Cover	R50124083506
11	Assy. Front Cover	R50124080242
12	Assy., Air Discharge Housing	R50124085608

Parts Not in Diagram

No	Description	Part No
	Filter	R12014062321
	G11 Handset (Cooling)	R04089065334
	G11 Handset (Heat Pump)	R04089026987
	Assy, Mounting Plate	R50014062324
	Motor, Air Swing	R03039021375
	Filter, Nanosliver (With Frame)	R12014080141
	Filter, Nanovis (With Frame)	R12014080143
	Service Panel	R12014060547
	W2 Control Module	R04084085118
	Assy, Negative Ionizer Bracket	R50044064590
	Louver Top	R12014085592
	Louver Bottom	R12014085593

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Model : MWM 020 / 025 GW



No	Description	Part No
1	Assy., Chassis	R50124068170
2	Fan Motor	
	MWM020GW	R03034074204
	MWM025GW	R03034028559
3	Cross Flow Fan	R03029209158
4	Fan, Bush	R11014023775
5	Assy., Coil	R50024093188
6	Piping, Clamp	R12014071297
7	Assy., Drain Pan	R50124088187
8	Drain Hose	R10024015319
9	Assy., Control Box	R50044084348

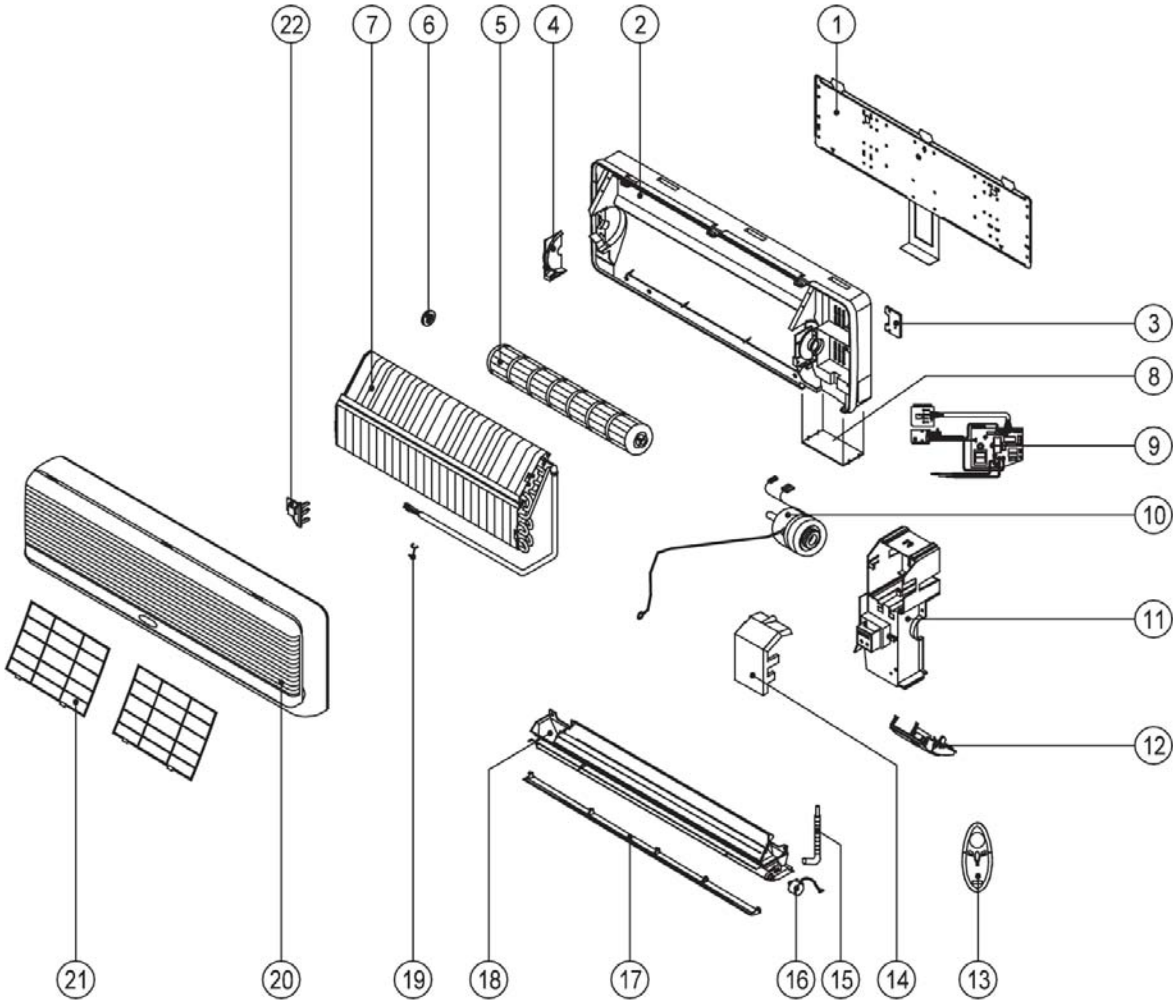
Parts Not in Diagram

10	Assy., Control Box Cover	R50124085080

No	Description	Part No
11	Assy., Front Cover	R50124071424
12	Assy., Air Discharge Housing	R50124071426
13	Louver Bottom	R12014066821
14	Louver Top	R12014066820
15	Saranet Air Filter	R12014066832
16	W2 Control Module	R04084085119
17	Assy., Negative Ionizer	R04239022932
18	G11 Handset (Cooling)	R04089065334
	G11 Handset (Heat Pump)	R04089026987
19	Air Swing Motor	R03039022933
20	Assy., Mounting Plate	R50014036133

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Model : MWM 0301W

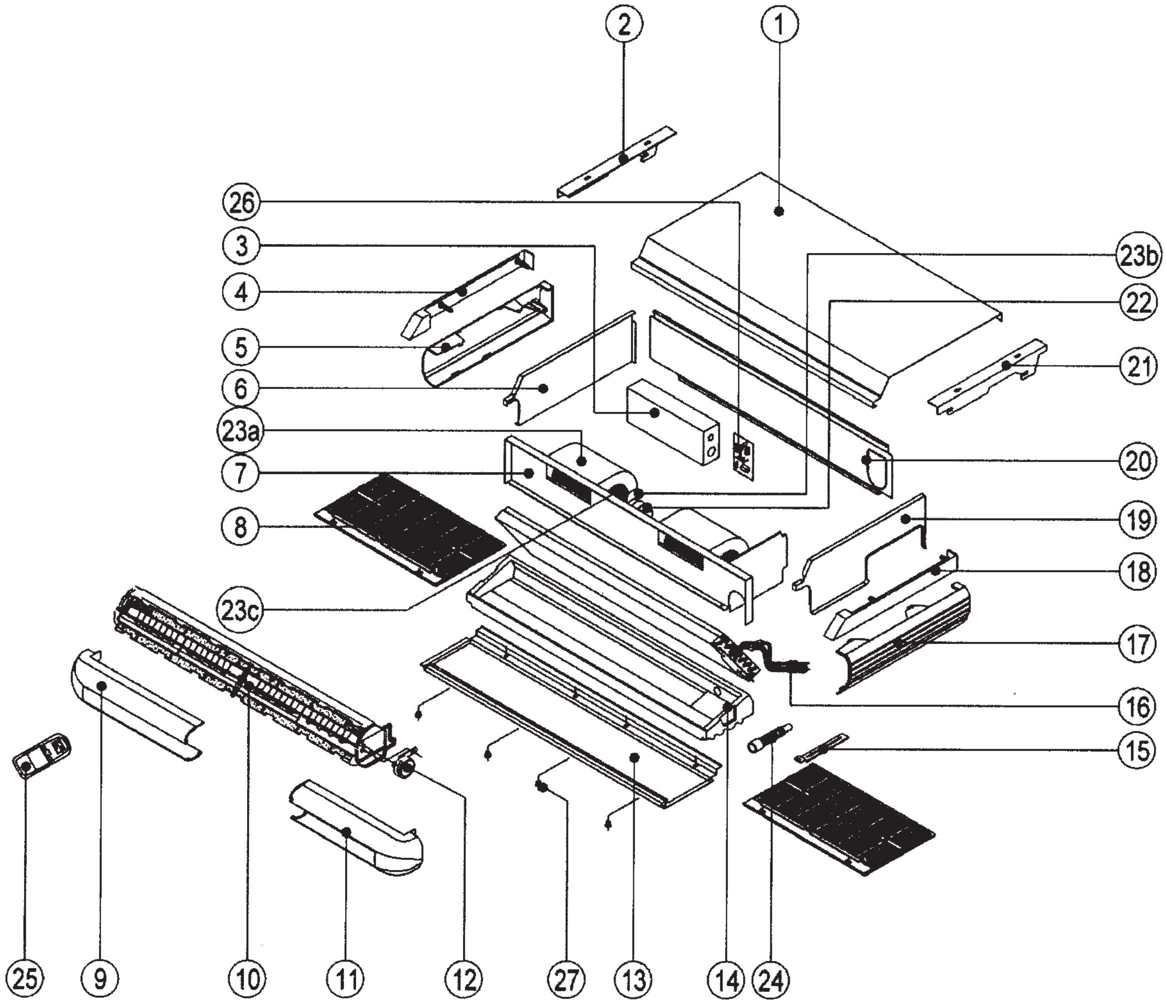


No	Description	Part No
1	Assy., Installation Bracket	R50014050721
2	Assy. Chassis	R50124050703
3	Piping Clamp	R07014024546
4	Fan Bush Bracket	R12014050709
5	Cross Flow Fan	R03029013842
6	Fan Bush Bracket	R11019013841
7	Assy. Coil	R50024077702
8	Service Panel	R12014050685
9	Control Module	R04084087919
10	Fan Motor	R03034052105
11	Assy., Front Cover	-

No	Description	Part No
12	LED Light Bracket	R12014050679
13	G7 Handset	R04084047723
14	Control Box Cover	R12014050681
15	Assy. Drain Hose	R10024015319
16	Air Swing Motor	R04084007088
17	Air Louver	R12014050717
18	Assy. Air Discharge Housing	R50124050712
19	Coil Sensor Clip	R07054021183
20	Assy. Front Cover	R20124050723
21	Saranet Filter	R12014052726
22	Thermistor Holder	R12014016707

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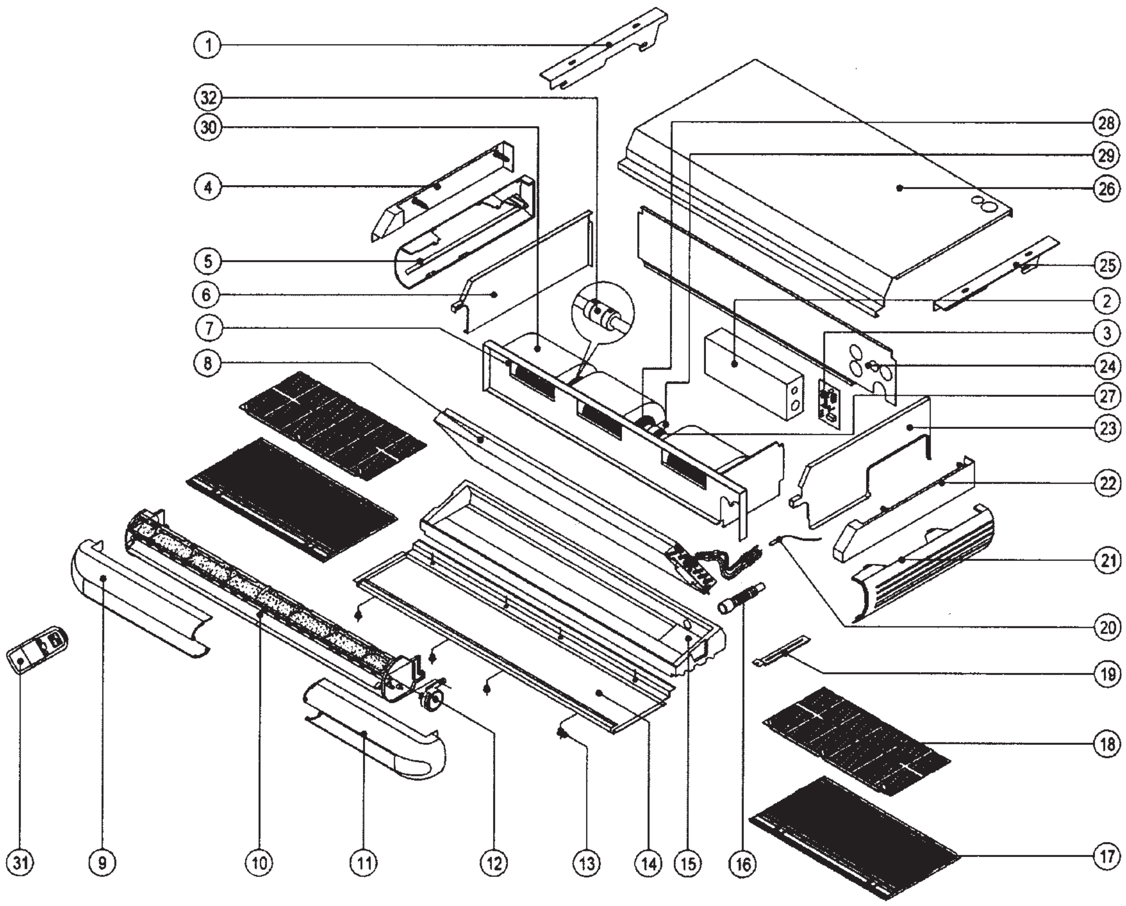
Model : MCM 020 / 025 DW



No	Description	Part No.	No	Description	Part No.
1	Top Panel	R01014022475	17	Side Frame Assy., Right	R12013022502
2	Hanger Bracket - Left	R01014058940	18	Close Up, Side Panel (Right)	R12013022637
3	Control Box	R01014022491	19	Coil Holder Assy. - Right	R01014070734
4	Close Up, Side Panel (Left)	R12013022636	20	Back Panel	R01013058750
5	Side Frame Assy., Left	R12013022501	21	Hanger Bracket - Right	R01014032843
6	Coil Holder Assy. - Left	R01014022480	22	Fan Motor	
7	Fan Deck	R50014070732		MCM040DW	R03039012873
8	Air Intake Grille Assy.	R50124032385		MCM050DW	R03039012875
9	Front Frame - Left	R12013022443	23	Blower Housing, Top	R03094026108
10	Louver Assy.	R50129023197		Blower Housing, Bottom	R03094021607
11	Front Frame - Right	R12013022444		Blower Wheel	R03024004754
12	Air Swing Motor Assy.	R50034026127	24	Drain Hose Assy.	R50124025113
13	Bottom Panel	R01015033342	25	G7 Handset (Cooling Only)	R04084047723
14	Drain Pan Assy.	R50124023274		G7 Handset (Heat Pump)	R04084027531
15	Centre Support Bracket	R01014022484	26	W2 Control Module	R04089021708
16	Coil Assy.	R50024064144			

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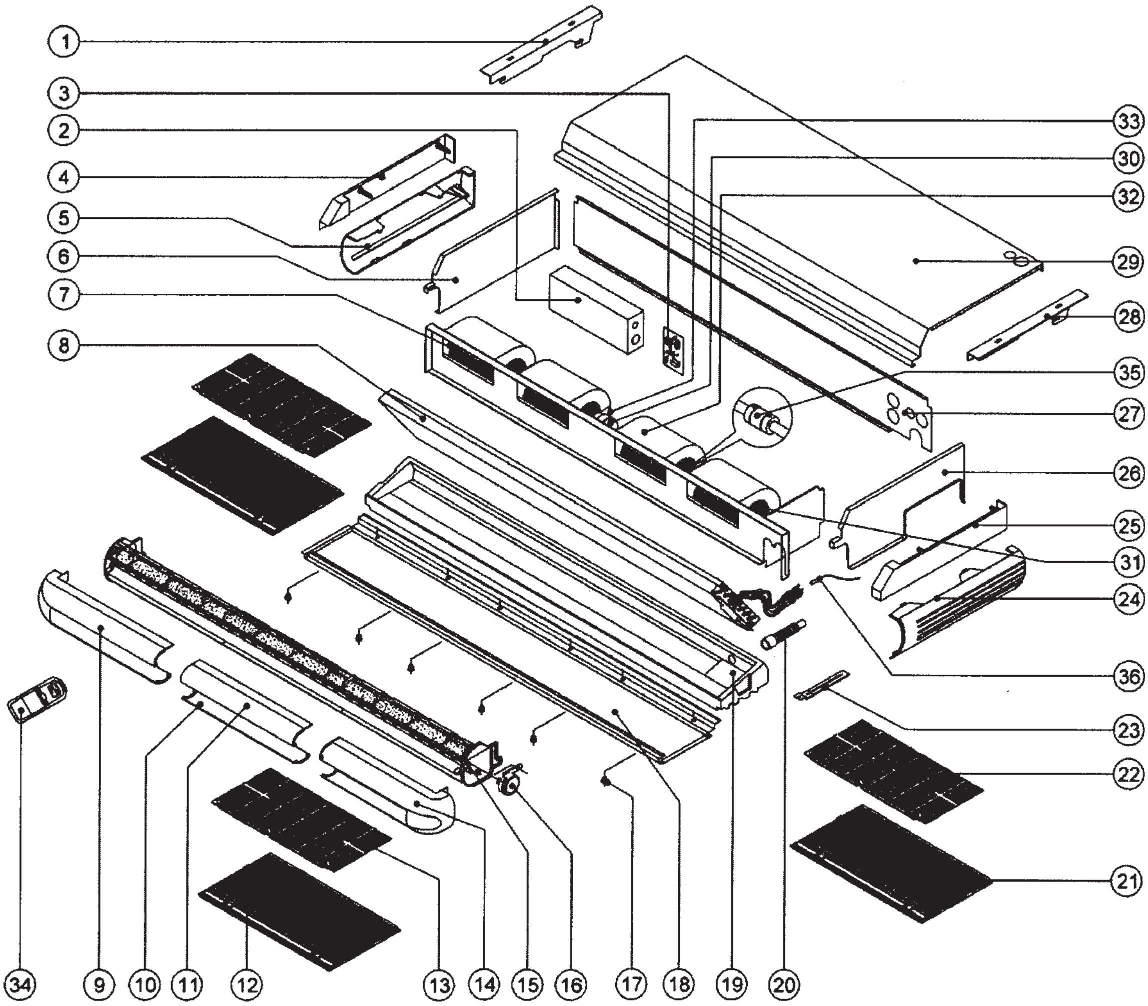
Model : MCM 030 DW



No	Description	Part No.
1	Bracket Hanger, Left	R01014058940
2	Control Box Cover	R01014022491
3	W2 control module	R04089021708
4	Close Up, Left	R12013024883
5	Frame, Side Left	R12013022501
6	Assy., Coil Holder Left	R50064028307
7	Fan Deck	R50014057534
8	Coil Assy.	R50024064141
9	Frame, Front Left	R12013022443
10	Assy., Louver	R50129023197
11	Frame, Front Right	R12013022444
12	Air Swing Motor Assy.	R50034026127
13	Air Intake Grille Frame Holder Assy.	R12014022098
14	Bottom Panel	R01015033342
15	Drain Pan Assy.	R50124023274
16	Drain Hose Assy.	R50124025113
17	Grille, Air Intake	R50124032385
18	Assy, Filter Frame Left/Right	R50124022130
19	Bracket Centre Support	R01014022484
20	Thermister	-
21	Frame, Side Right	R12013022502
22	Close Up, Right	R12013024884
23	Assy., Coil Holder Right	R50064059069
24	Back Panel	R01014058754
25	Bracket Hanger, Right	R01014032843
26	Top Panel	R50014028305
27	Fan Motor	R03039012877
28	Blower Wheel	R03024004754
29	Housing Blower, Bottom	R03090030300
30	Housing Blower, Top	R03094026108
31	G7 Handset (Cooling Only)	R04084047723
	G7 Handset (Heat Pump)	R04084027531
32	Rubber Coupling	R11054025589

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Model : MCM 040 / 050 DW

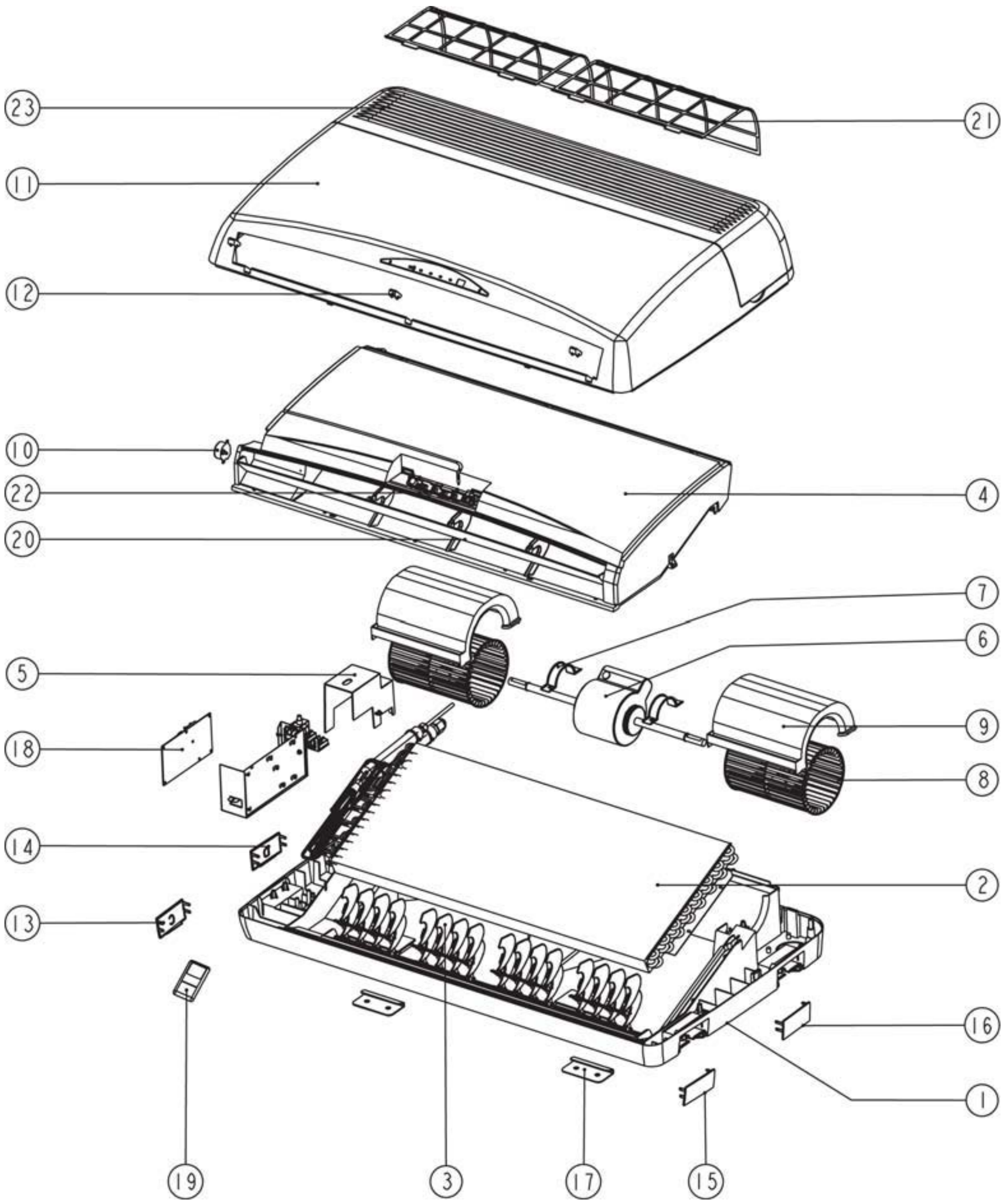


No	Description	Part No.
1	Bracket Hanger, Left	R01014058940
2	Control Box Cover	R01014022491
3	W2 Control Module	R04089021708
4	Close Up, Left	R12013024883
5	Frame, Side Left	R12013022501
6	Assy., Coil Holder Left	R50064028307
7	Fan Deck	R50014058757
8	Coil Assy. MCM040DW MCM050DW	 R50024064137 R50024064138
9	Frame, Front Left	R12013022443
10	Frame Bottom Centre	R12013028976
11	Front Top Centre	R12014028975
12	Air Intake Grille Frame Center Assy.	R50124032397
13	Air Intake Grille Frame Center Assy.	R50124032397
14	Frame, Front Right	R12013022444
15	Assy., Louver Bottom	R50129003073
16	Air Swing Motor Assy.	R50034026127
17	Air Intake Grille Frame Holder Assy.	R50124026115
18	Bottom Panel	R01015024889
19	Drain Pan Assy.	R50124029045

No	Description	Part No.
20	Drain Hose Assy.	R50124025113
21	Air intake Grille Assy.	R50124032385
22	Air intake Grille Assy.	R50124032385
23	Bracket, Centre Support	R01014022484
24	Frame, Side Right	R12013022502
25	Close Up, Right	R12013024884
26	Assy., Coil Holder Right	R50014059069
27	Back Panel	R01014058758
28	Bracket Hanger, Right	R01014032843
29	Top Panel	R50014030260
30	Fan Motor MCM040DW MCM050DW	 R03039013481 R03039012881
31	Blower Wheel	R03024004754
32	Housing Blower, Bottom	R03090030300
33	Housing Blower, Top	R03094026108
34	G7 Handset (Cooling Only) G7 Handset (Heat Pump)	R04084047723 R04084027531
35	Rubber Coupling	R11054025589
36	Thermister	-

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Model : MCM 015 / 020 / 025 EW

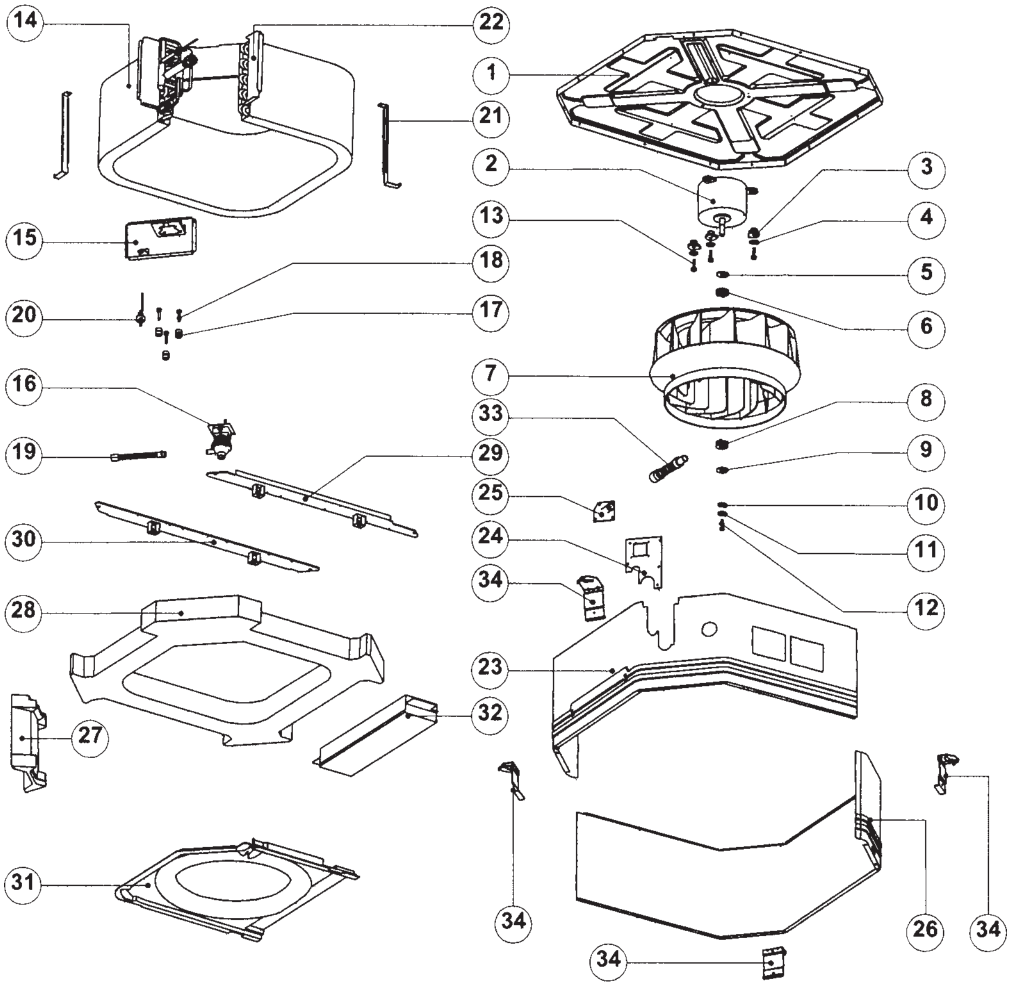


No	Description	Part No
1	Assy., Top Panel	R50124074907
2	Assy., Coil	R50024082075
3	Assy., Vane	R50124074906
4	Assy., Drain Pan	R50124085977
5	Assy., Control Box	R50044085921
6	Cover, Terminal Box	R50124080719
7	Motor	
	MCM015EW	R03039023304
	MCM020EW	R03039023305
	MCM025EW	R03039023306
8	Motor, Bracket	R01014071324
9	Blower Wheel	R03024004754
10	Blower Housing	R12014071385
11	Motor, Air Swing	R03039023303
12	Assy., Bottom Panel	R50124074909

No	Description	Part No
13	Cover, Hanger L1 (C)	R12014071354
14	Cover, Hanger L2 (D)	R12014071355
15	Cover, Hanger R1 (A)	R12014071356
16	Cover, Hanger R2 (B)	R12014071357
17	Mounting Bracket	R01014071318
18	Control Module	R04089029250
19	G11 Handset (Cooling Only)	R04084047723
	G11 Handset (Heatpump)	R04084027351
20	Louver	R12014071335
21	Saranet Filter	R12014071342
22	Assy., LED Board	
	MCM015/020/025EW (Cooling Only)	R50044085920
	MCM015/020/025EW (Heat Pump)	R50044085920
23	Air Intake Grille	R12014071341

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Model : MCK-AW

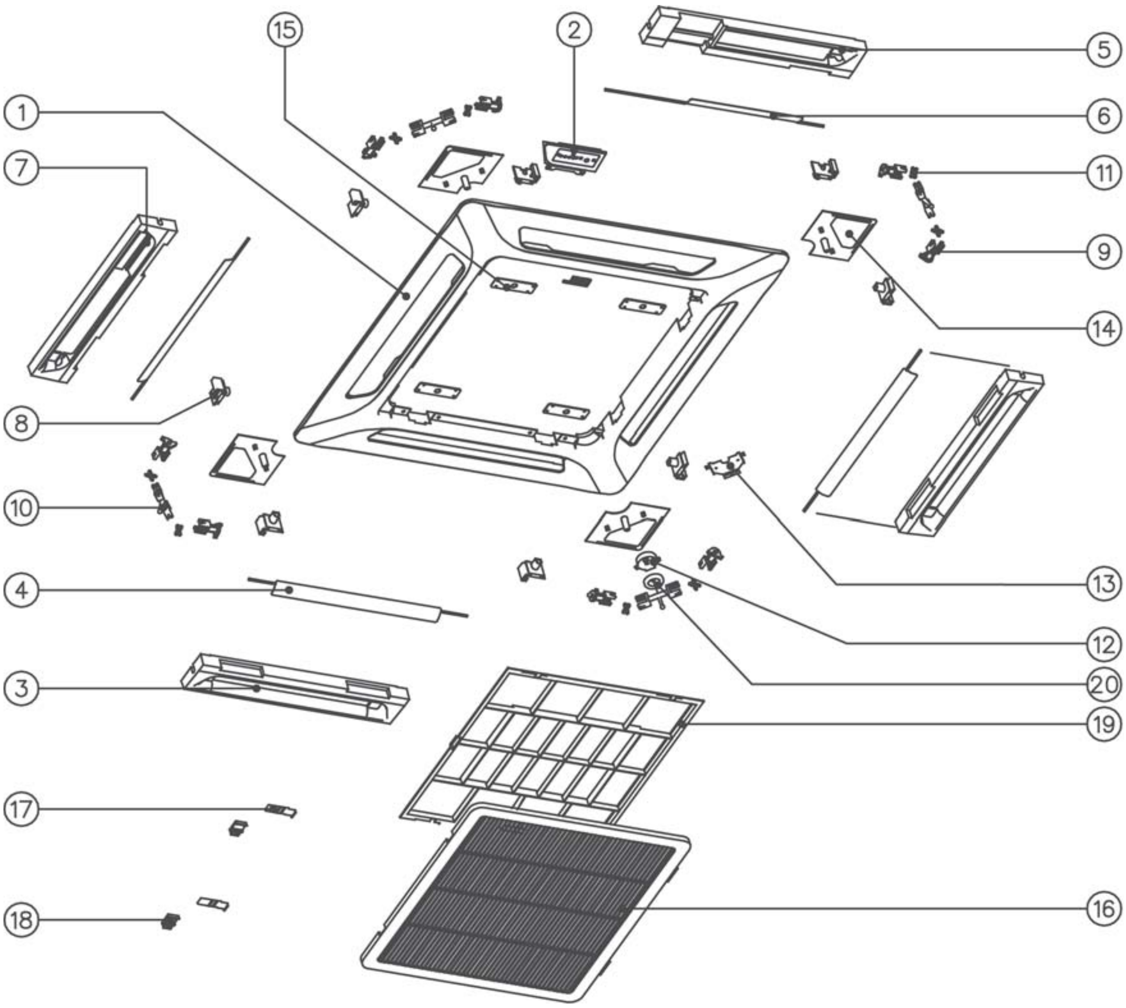


No	Description	Part No.
1	Base Pan	R50013028745
2	Fan Motor	
	MCK 020A/AR	R03039027728
	MCK 025A/AR	R03039027729
	MCK 030A/AR	R03039027730
	MCK 040A/AR	R03039027731
	MCK 050A/AR	R03039027732
3	Fan Motor Bush	R11014049558
4	Plain Washer	-
5	Fan Motor Washer	R01024031691
6	Bottom Coupling	R11054026619
7	Turbo Fan	R03029001613
8	Top Coupling	R11054026610
9	Flat Washer	R07044085198
10	Plain Washer	R07044003768
11	Spring Washer	R07044003769
12	Hexagon Bolt, M8 x 20mm	R07034028746
13	Hexagon Bolt, M8 x 15mm	R07034028747
14	Assy., Coil	
	MCK020AW	R50024053466
	MCK025AW	R50024053467
	MCK030/040/050AW	R50024053468
15	Drain Pump Bracket	R50014028765

No	Description	Part No.
16	Drain Pump	R04139022965
17	Drain Pump Bush	R11014026614
18	Hexagon Bolt, M5 x 27mm	R07034028747
19	Drain Hose	R10029001615
20	Level Switch	R04069022966
21	Coil Support	R01024079035
22	Partition	R50014028766
23	Side Panel Front	R50013028767
24	Valve Plate	R01014033825
25	Drain Connector	R12014028769
26	Side Panel Back	R50013028771
27	Air Guide	R12033028773
28	Drain Pan	R50123028775
29	Fix Bracket Front	R50014028779
30	Fix Bracket Back	R50014028782
31	Fan Cover	R12010027359
32	Terminal Box	-
33	Drain Pipe	R50124025113
34	Hanger A	R01024037399
	Hanger B	R01014037400
	Hanger C	R01024037401
Parts Not in Diagram		
	W2 Control Module	R04089021708

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCK-AW Panel



No	Description	Part No.
1	Front Frame Panel	R12010024616
2	Receiver Bracket	R12013028834
3	Discharge Housing A	R06083028837
4	Assy., Louver A	R50124072026
5	Discharge Housing B	R06083028843
6	Assy., Louver B	R50124073292
7	Discharge Housing D	R06083028846
8	Louver Bracket	R12014028670
9	Crank Shaft	R12014028671
10	Crank Connector	R12014028673
11	Crank Cross	R12014028669
12	Swing Motor	R03039001653

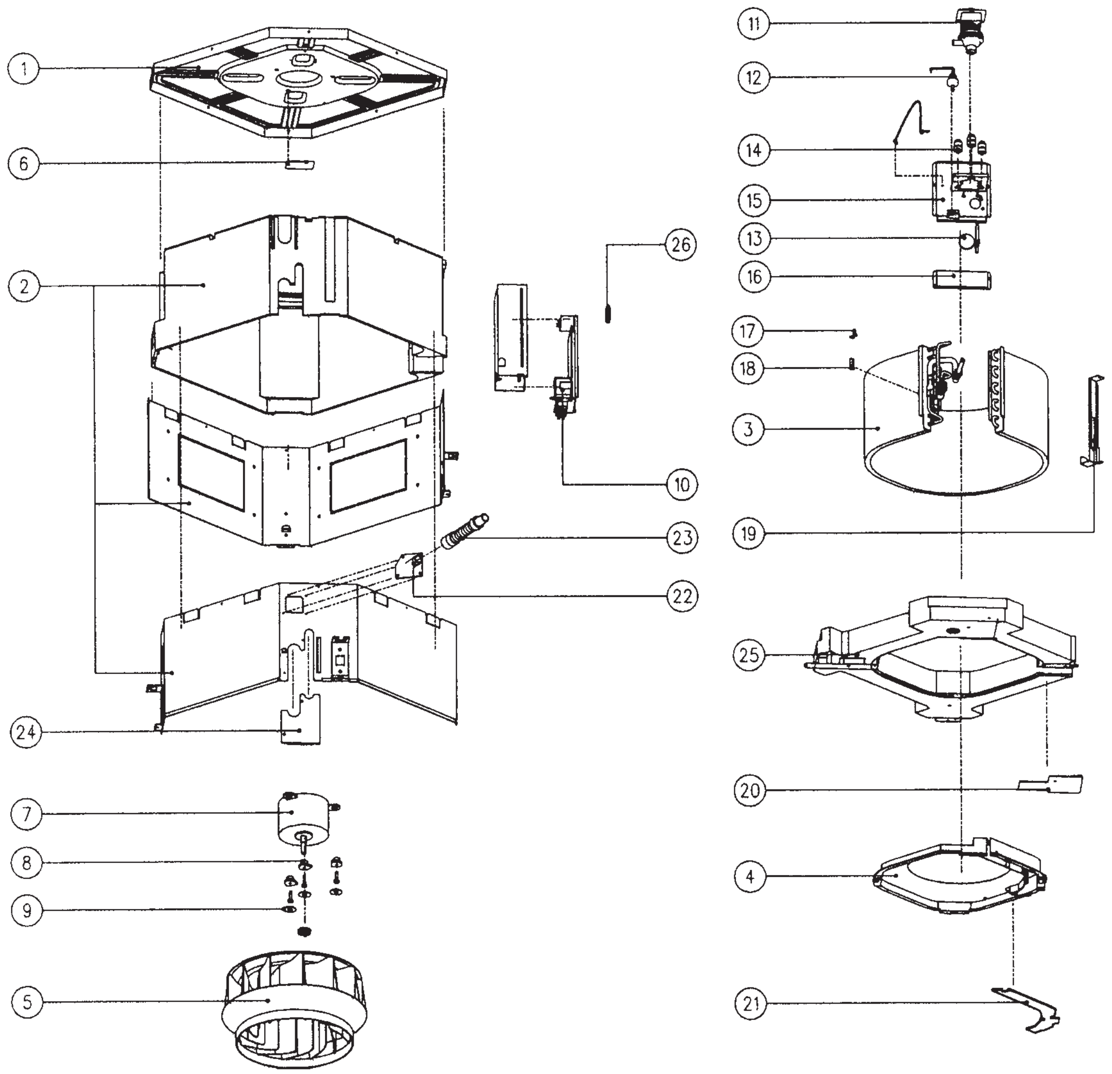
No	Description	Part No.
13	Swing Motor Bracket	R01024033167
14	Panel Cover	R12014028668
15	Fix Plate	R01024028051
16	Air Intake Grille	R12010021920
17	Grille Lock	R12014028674
18	Grille Lock Bracket	R12014028675
19	Air Filter	R03080021919
20	Air Swing Cap	R12014028672

Parts Not in Diagram

	G7 Handset	
	Cooling Only Model	R04084047723
	Heat Pump Model	R04084047726

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCK-CW



No	Description	Part No.
1	Assy., Base Pan	R01014053368
2	Assy., Casing	R50014057905
	Side Panel A	R01014053369
	Side Panel B	R01014053370
3	Assy., Coil	
	MCK 010CW	R50024066202
	MCK 015/020CW	R50024066203
4	Fan Cover	R12014053394
5	Turbo Fan	R03029016598
6	Plate, Wire	R01014053397
7	Fan Motor	
	MCK010CW	R03039016595
	MCK015CW	R03039016596
	MCK020CW	R03039016597
8	Bush, Fan Motor	R11014049558
9	Bush, Fan Motor Ring	R11014049559
10	W2 Control Module	R04089021708
11	Drain Pump	R04139022965
12	Level Switch	R04069022966

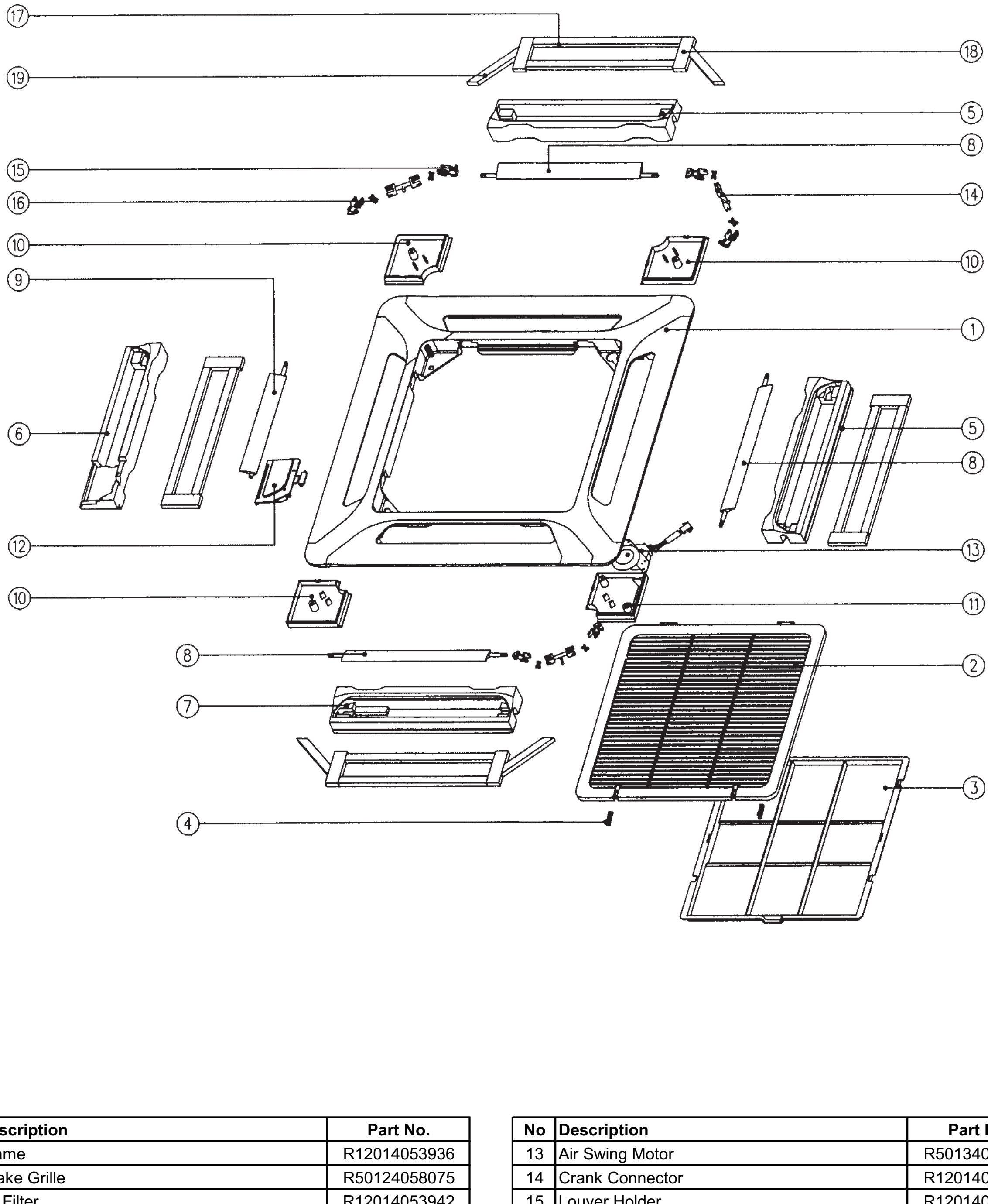
No	Description	Part No.
13	Bush, Wire	R11014001876
14	Bush, Drain Pump	R11014026614
15	Assy., Drain Pump Support Bracket	R50014054265
16	Assy., End Plate Support	R50014057987
17	Clip, Coil Sensor	R07054021183
18	Tube, Coil Sensor Holder	R02014021112
19	Support, Coil	R01014079034
20	Cover, Terminal	R12014053387
21	Cover, Wire	R12014053396
22	Drain Connector	R12014028769
23	Drain Hose	R10029021878
24	Assy., Valve Plate 2	R50014066457
	Assy., Valve Plate1	R50014066453
25	Assy., Drain Pan	R50064061257
26	Bush, Wire	R11014042391

Parts Not in Diagram

	Capacitor	
	MCK010/015CW	R04029026753
	MCK020CW	R04029026755

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCK-CW Panel



No	Description	Part No.
1	Frame	R12014053936
2	Intake Grille	R50124058075
3	Air Filter	R12014053942
4	Grille Lock	R12014053940
5	Discharge Foam	R50064058333
6	Discharge Foam, LED	R50064058332
7	Discharge Foam, Short	R50064058331
8	Louver	R12014053945
9	Louver, LED	R12014053949
10	Linkage Cover	R12014053947
11	Linkage Cover, Motor	R12014053946
12	Assy., Bracket Receiver	R12014053937

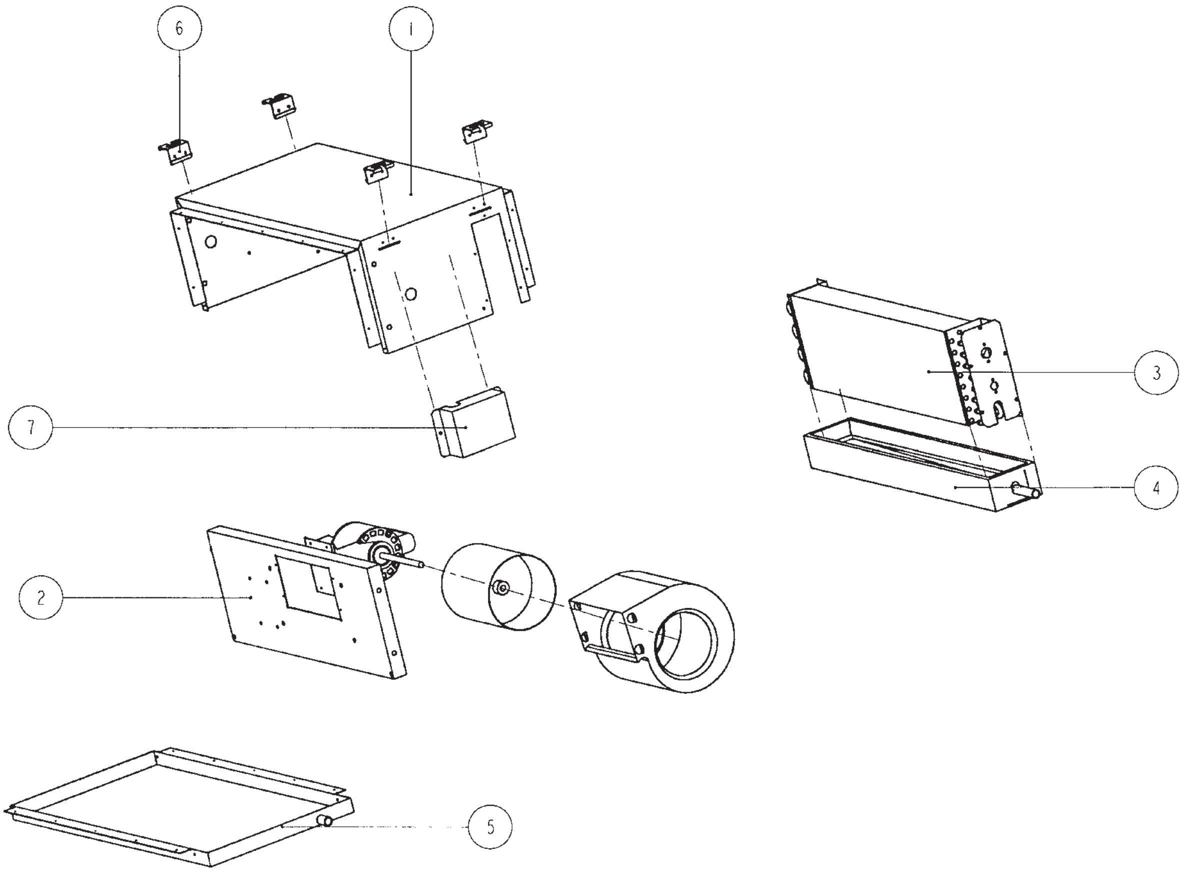
No	Description	Part No.
13	Air Swing Motor	R50134058091
14	Crank Connector	R12014053952
15	Louver Holder	R12014053943
16	Crank Cross	R12014028669
17	Insulation, Long	R06014055980
18	Insulation, Short	R06014055981
19	Insulation, Corner	R06014055982

Parts Not in Diagram

	G7 Handset	
	Cooling Only Model	R04084047723
	Heat Pump Model	R04084047726

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 010 CW

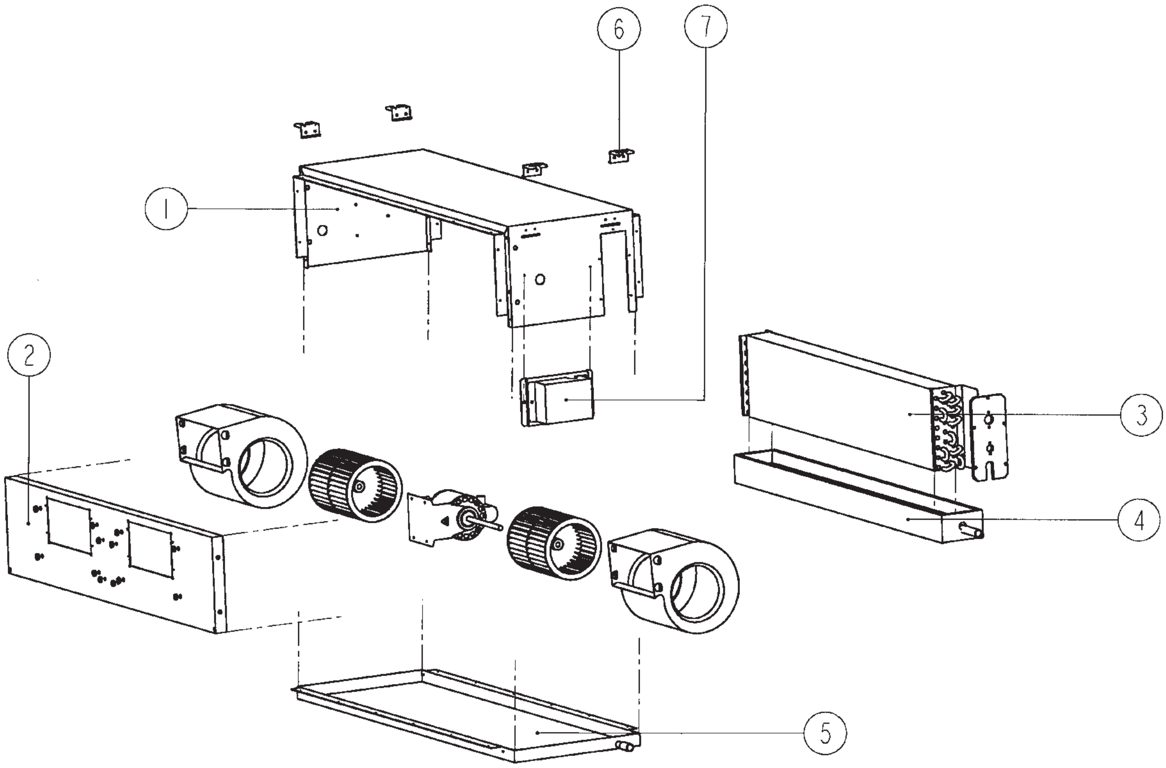


No	Description	Part No
1	Cabinet	R01013034004
2	Fan Deck	R50014032627
3	Assy., Coil MCC 010CW	 R50024050508
4	Primary Drain Pan	R50063033907
5	Secondary Drain Pan	R50019009390
6	Hanger	R01014032372
7	-	-

No	Description	Part No
Parts Not in Diagram		
	Assy., Wheel & Housing	R50039005356
	Fan Motor	R03039004896
	Air Filter	R03084037810
	Assy., Drain Pipe Joint	R50094035451
	W2 Control Module	R04089021708
	Handset SLM Cooling Only SLM Heat Pump	 R04089011809 R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 015 / 020 / 025 CW



No	Description	Part No
1	Cabinet	
	MCC015CW	R01013032453
	MCC020CW	R01013034005
	MCC025CW	R01013032362
2	Fan Deck	
	MCC015CW	R50014032628
	MCC020CW	R50014035082
	MCC025CW	R50014032629
3	Assy., Coil	
	MCC 015CW	R50024050509
	MCC 020CW	R50024050510
	MCC 025CW	R50024048218
4	Primary Drain Pan	
	MCC015CW	R50063032460
	MCC020CW	R50063033908
	MCC025CW	R50063032369
5	Secondary Drain Pan	
	MCC015CW	R50019009402
	MCC020CW	R50019009407
	MCC025CW	R50019009420

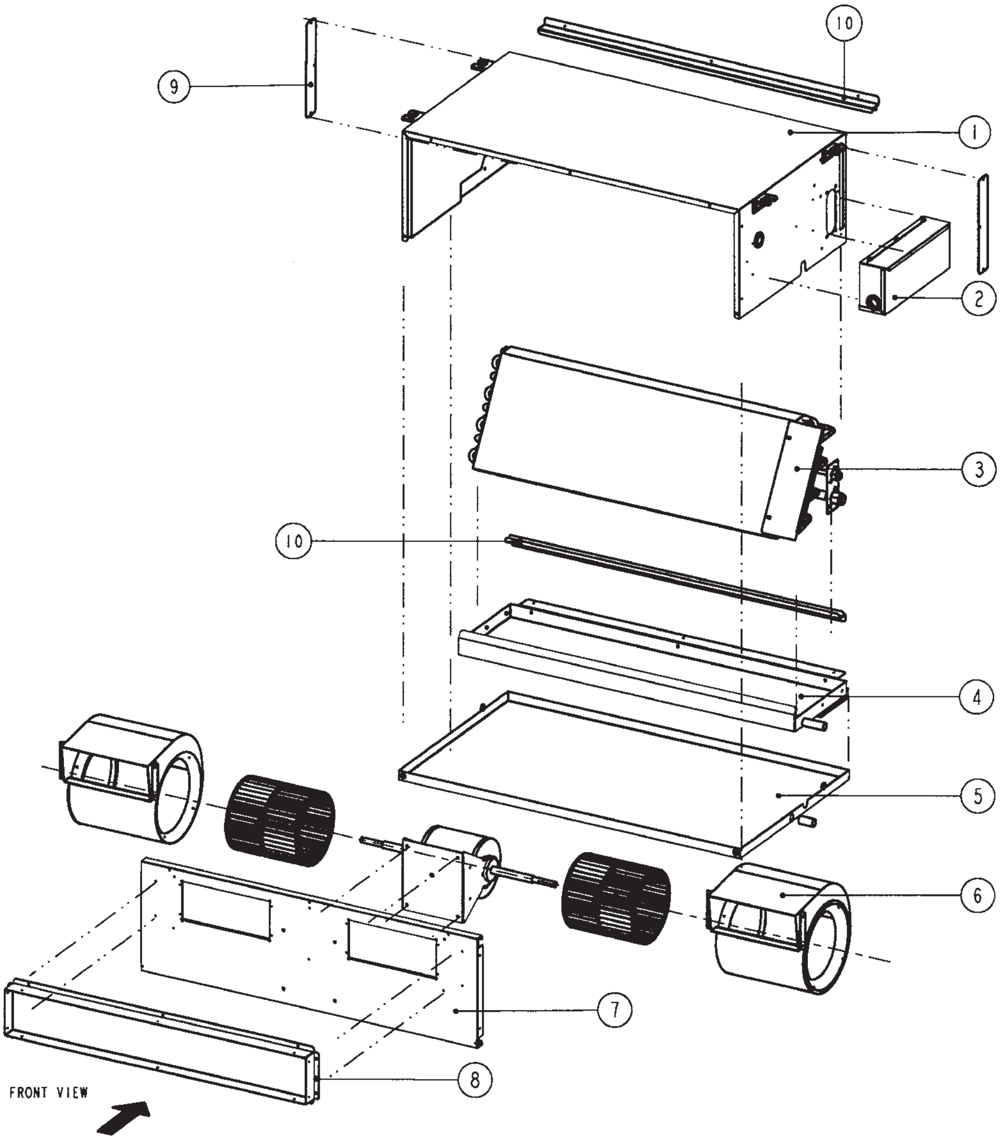
No	Description	Part No
6	Hanger	R01014032372
7	-	-

Parts Not in Diagram

	Assy., Wheel & Housing - Left	R50039005356
	Assy., Wheel & Housing - Right	R50039005355
	Fan Motor	
	MCC015CW	R03039004897
	MCC020CW	R03039004898
	MCC025CW	R03039004899
	Air Filter	
	MCC015CW	R03084037811
	MCC020CW	R03084037809
	MCC025CW	R03084037812
	Assy., Drain Pipe Joint	R50094035451
	W2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 028 CW



No	Description	Part No
1	Assy., Top Panel	R01014054385
2	-	-
3	Assy., Coil	R50024055064
4	Assy., Drain Pan (Small)	R50014049248
5	Assy., Drain Pan (Big)	R50014049249
6	Assy., Wheel & Housing - Left	R50034051182
	Assy., Wheel & Housing - Right	R50034051183
7	Panel, Blower	R50014049251
8	Flange, Blower	R01014049296
9	Filter Rail, Cover	R01014049263

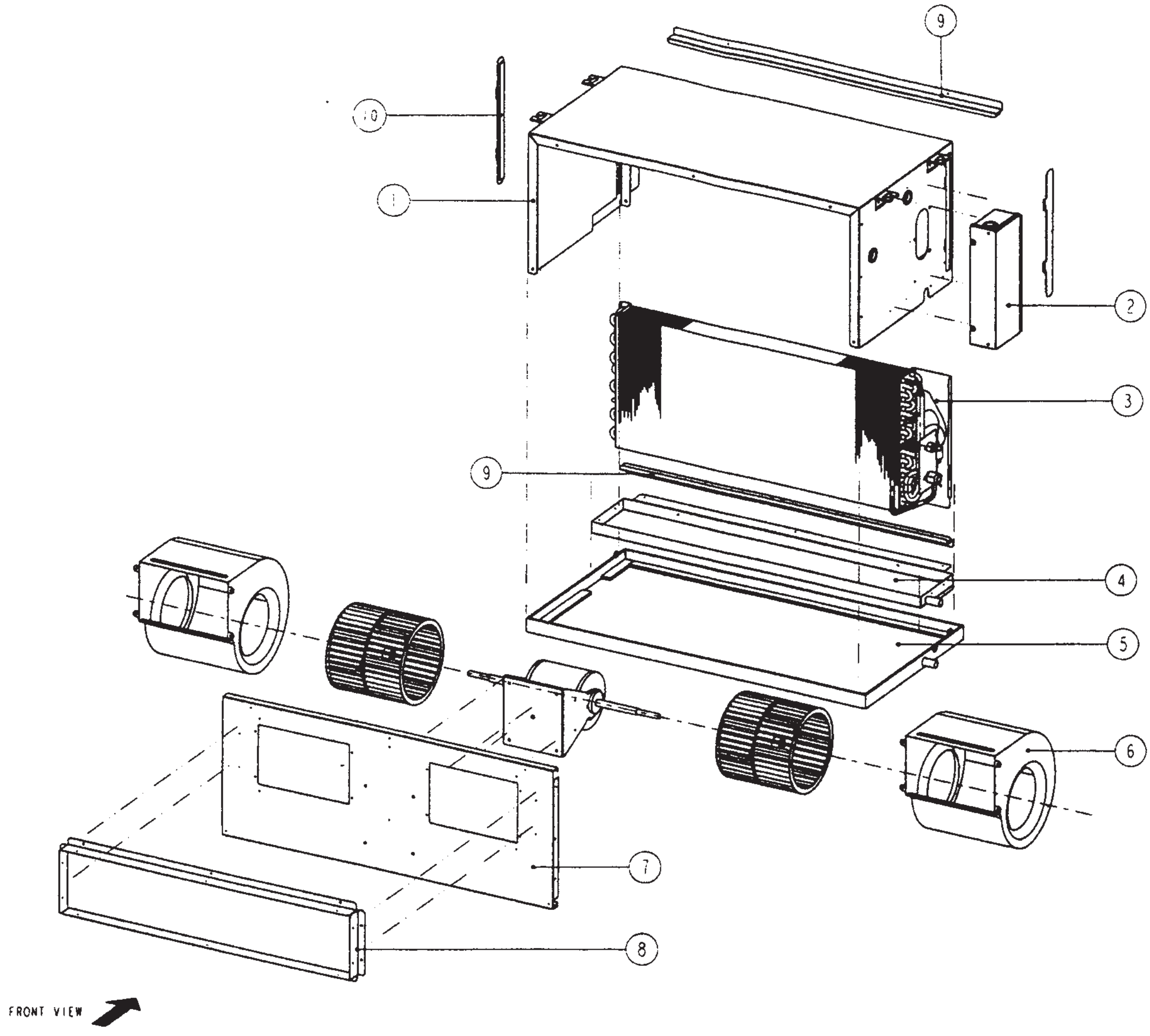
No	Description	Part No
10	Filter Rail	R12014070626

Parts Not in Diagram

	Hanger	R01014032372
	Fan Motor	R03039014589
	Bracket, Motor	R01014049242
	Support, Bracket Motor	R01014072553
	Air Filter	R03084051684
	W2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 030 CW

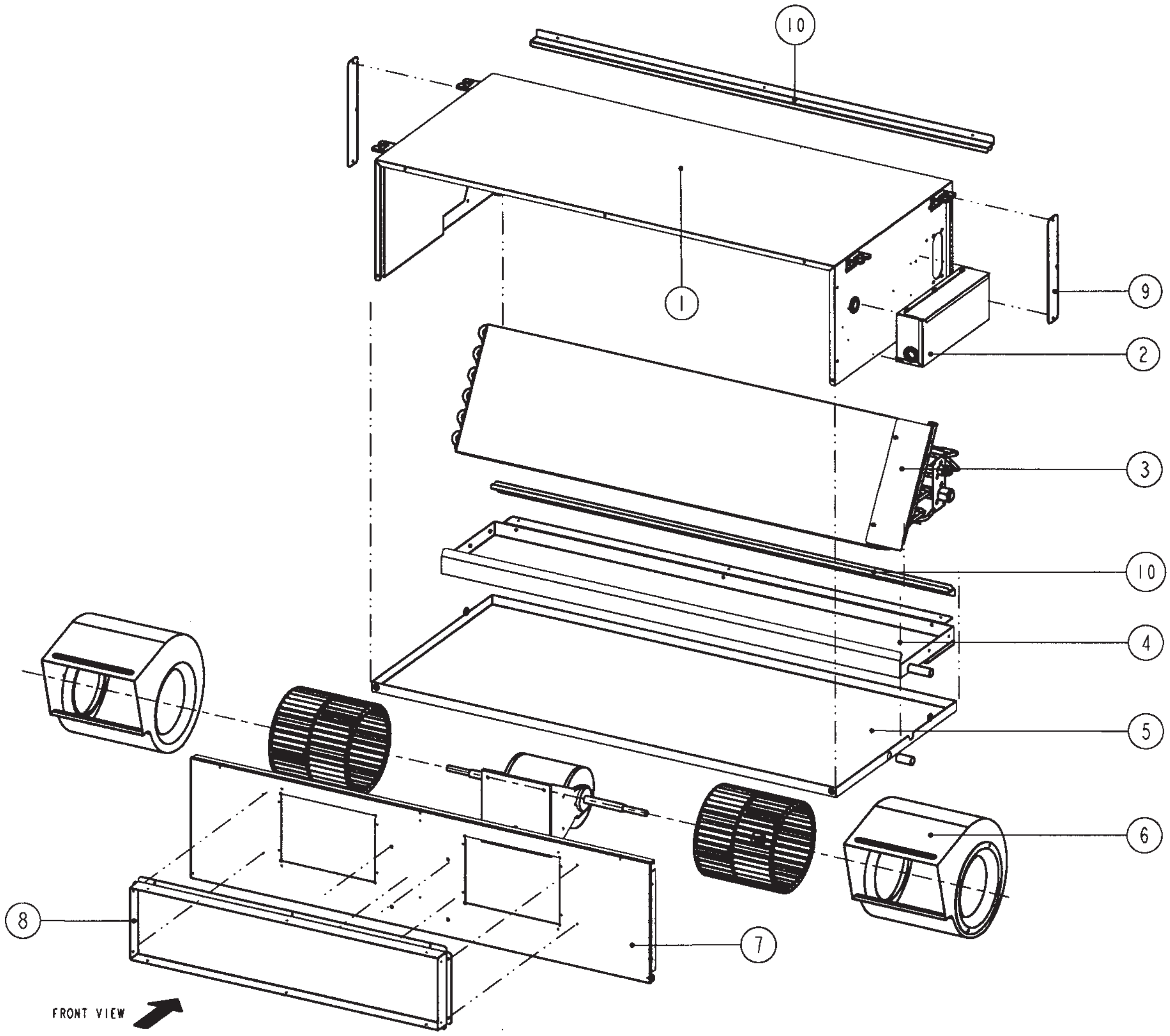


No	Description	Part No
1	Assy., Top Panel	R01014074187
2	-	-
3	Assy., Coil	R50024074162
4	Assy., Drain Pan (Small)	R50014053417
5	Assy., Drain Pan (Big)	R50014053418
6	Assy., Wheel & Housing - Left	R50034016257
	Assy., Wheel & Housing - Right	R50034016083
7	Panel, Blower	R50014040253
8	Flange, Blower	R01014039130
9	Filter Rail, Cover	R01014039769
10	Filter Rail	R12014070627

No	Description	Part No
Parts Not in Diagram		
	Hanger	R01014032372
	Fan Motor	R03039014585
	Bracket, Motor	R01014045260
	Support, Bracket Motor	R01014072554
	Air Filter	R03084055531
	W2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 038 CW

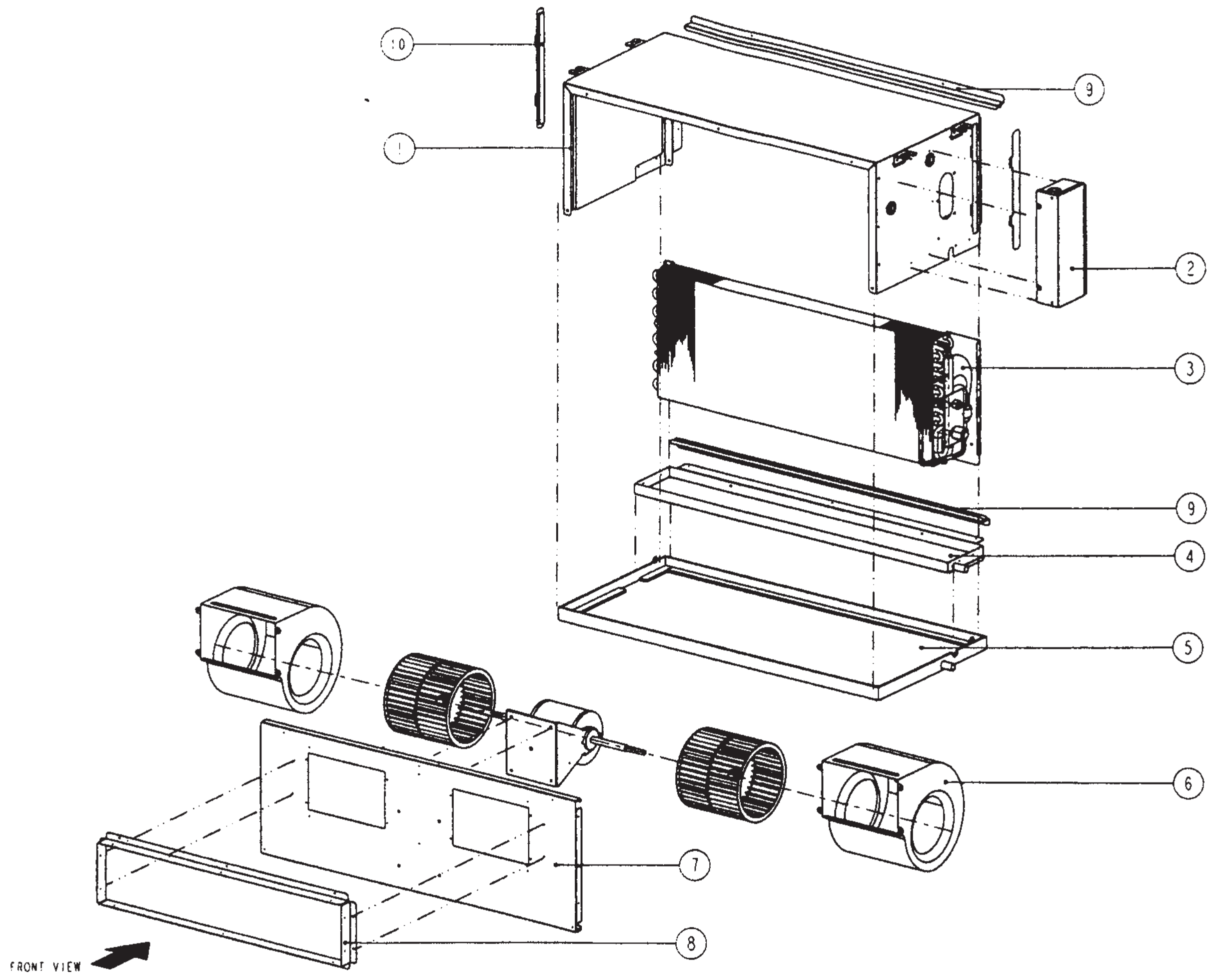


No	Description	Part No
1	Assy., Top Panel	R01014054409
2	-	-
3	Assy., Coil	R50024055071
4	Assy., Drain Pan (Small)	R50015049390
5	Assy., Drain Pan (Big)	R50015049389
6	Assy., Wheel & Housing - Left	R50034051693
	Assy., Wheel & Housing - Right	R50034051694
7	Panel, Blower	R50014049388
8	Flange, Blower	R01014051674
9	Filter Rail, Cover	R01014049384
10	Filter Rail	R12014070628

No	Description	Part No
Parts Not in Diagram		
	Hanger	R01014032372
	Fan Motor	R03039014590
	Bracket, Motor	R01014051673
	Support, Bracket Motor	R01014072555
	Air Filter	R03084051708
	W2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 040 CW

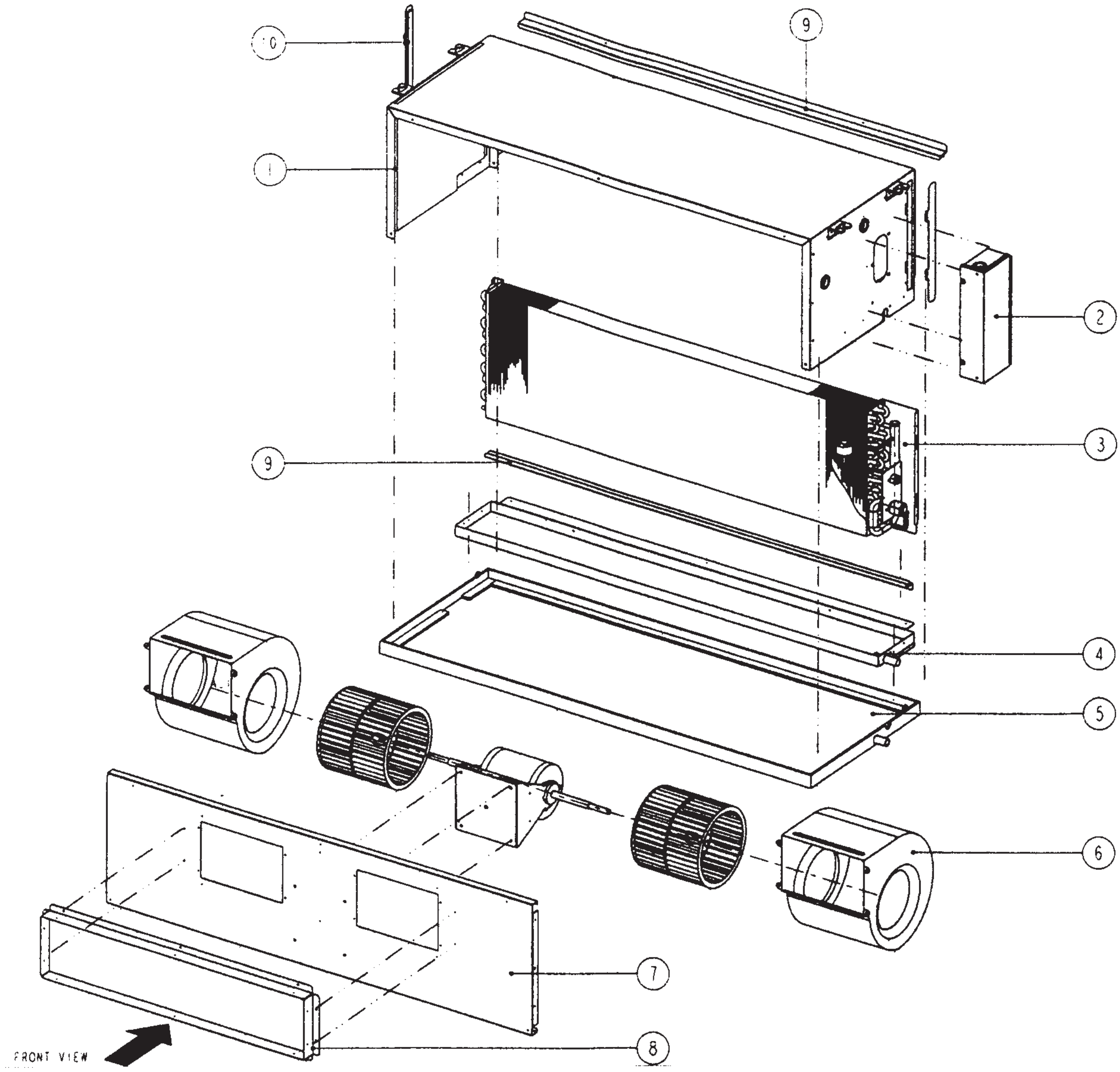


No	Description	Part No
1	Assy., Top Panel	R01014074188
2	-	-
3	Assy., Coil	R50024074163
4	Assy., Drain Pan (Small)	R50014053433
5	Assy., Drain Pan (Big)	R50014053434
6	Assy., Wheel & Housing - Left	R50034016257
	Assy., Wheel & Housing - Right	R50034016083
7	Panel, Blower	R50014039926
8	Flange, Blower	R01014039130
9	Filter Rail, Cover	R01014039769
10	Filter Rail	R12014070629

No	Description	Part No
Parts Not in Diagram		
	Hanger	R01014032372
	Fan Motor	R03039014586
	Bracket, Motor	R01014045260
	Support, Bracket Motor	R01014072554
	Air Filter	R03084055532
	W2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 050 CW



No	Description	Part No
1	Assy., Top Panel	R01014074189
2	-	-
3	Assy., Coil	R50024074164
4	Assy., Drain Pan (Small)	R50019053448
5	Assy., Drain Pan (Big)	R50019053449
6	Assy., Wheel & Housing - Left	R50034016258
	Assy., Wheel & Housing - Right	R50034016084
7	Panel, Blower	R50014039137
8	Flange, Blower	R01014039130
9	Filter Rail, Cover	R01014039769

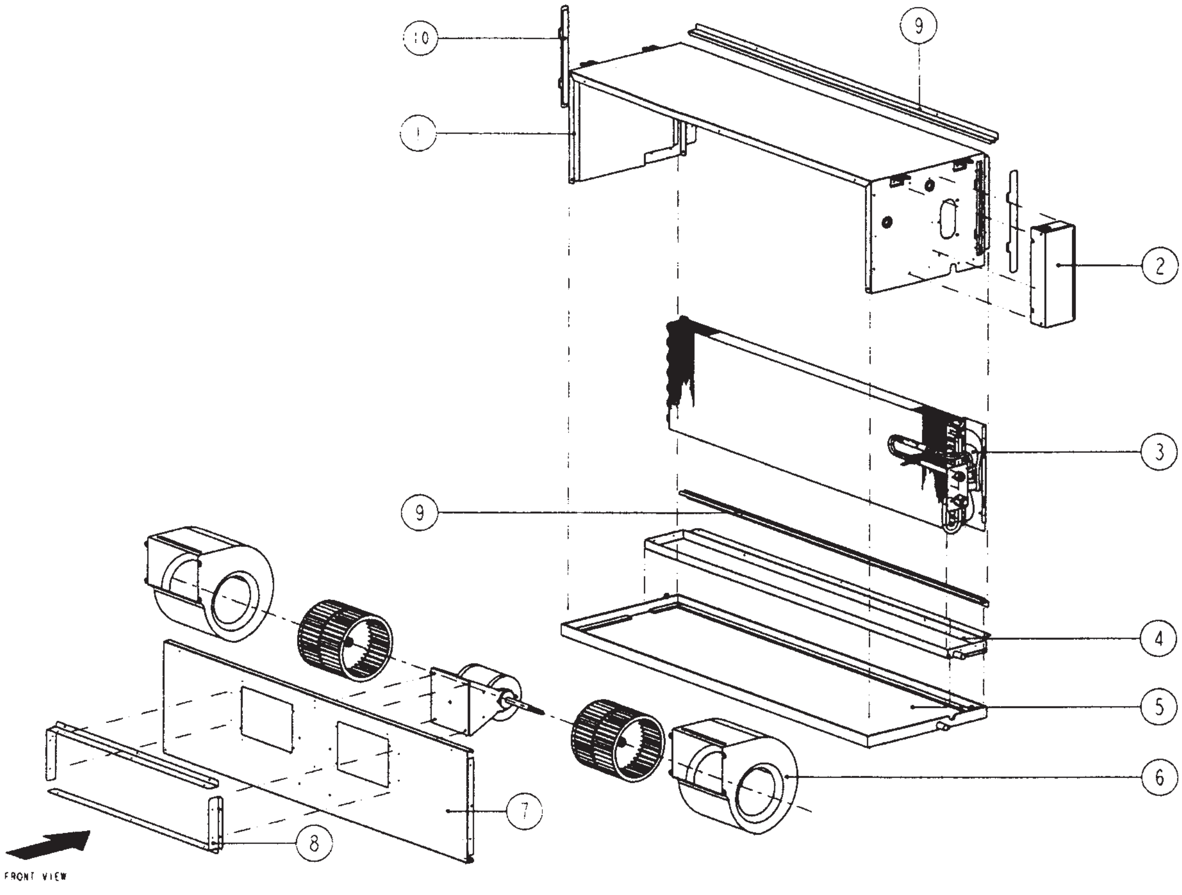
No	Description	Part No
10	Filter Rail	R12014070630

Parts Not in Diagram

	Hanger	R01014032372
	Fan Motor	R03039014587
	Bracket, Motor	R01014045664
	Support, Bracket Motor	R01014072555
	Air Filter	R03084055533
	W2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MCC 060 CW

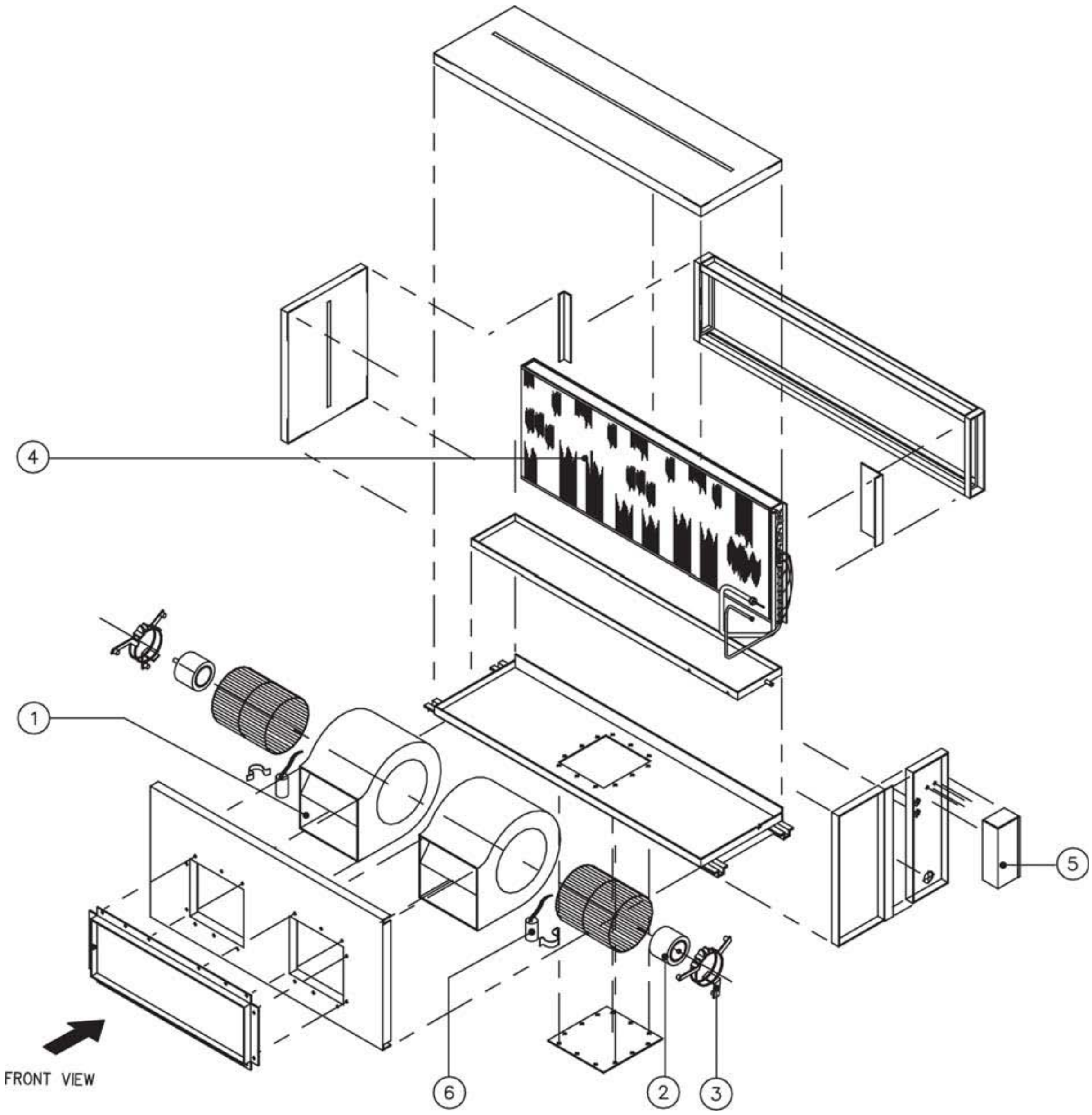


No	Description	Part No
1	Assy., Top Panel	R01014074910
2	-	-
3	Assy., Coil	R50024074165
4	Assy., Drain Pan (Small)	R50019053485
5	Assy., Drain Pan (Big)	R50019053486
6	Assy., Wheel & Housing - Left	R50034016258
	Assy., Wheel & Housing - Right	R50034016084
7	Panel, Blower	R50014039022
8	Flange, Blower	R01014039130
9	Filter Rail, Cover	R01014039769
10	Filter Rail	R12014070631

No	Description	Part No
Parts Not in Diagram		
	Hanger	R01014032372
	Fan Motor	R03039014588
	Bracket, Motor	R01014045664
	Support, Bracket Motor	R01014072555
	Air Filter	R03084055534
	L2 Control Module	R04089021708
	Handset	
	SLM Cooling Only	R04089011809
	SLM Heat Pump	R04089011753

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MDB 075 BW



NO	DESCRIPTION	PART NO.
1	BLOWER	R50034023132
2	MOTOR	R03039019596
3	FAN MOTOR BRACKET	R01024008152
4	ASSY COIL	R50024022843
5	TER. BOX	-

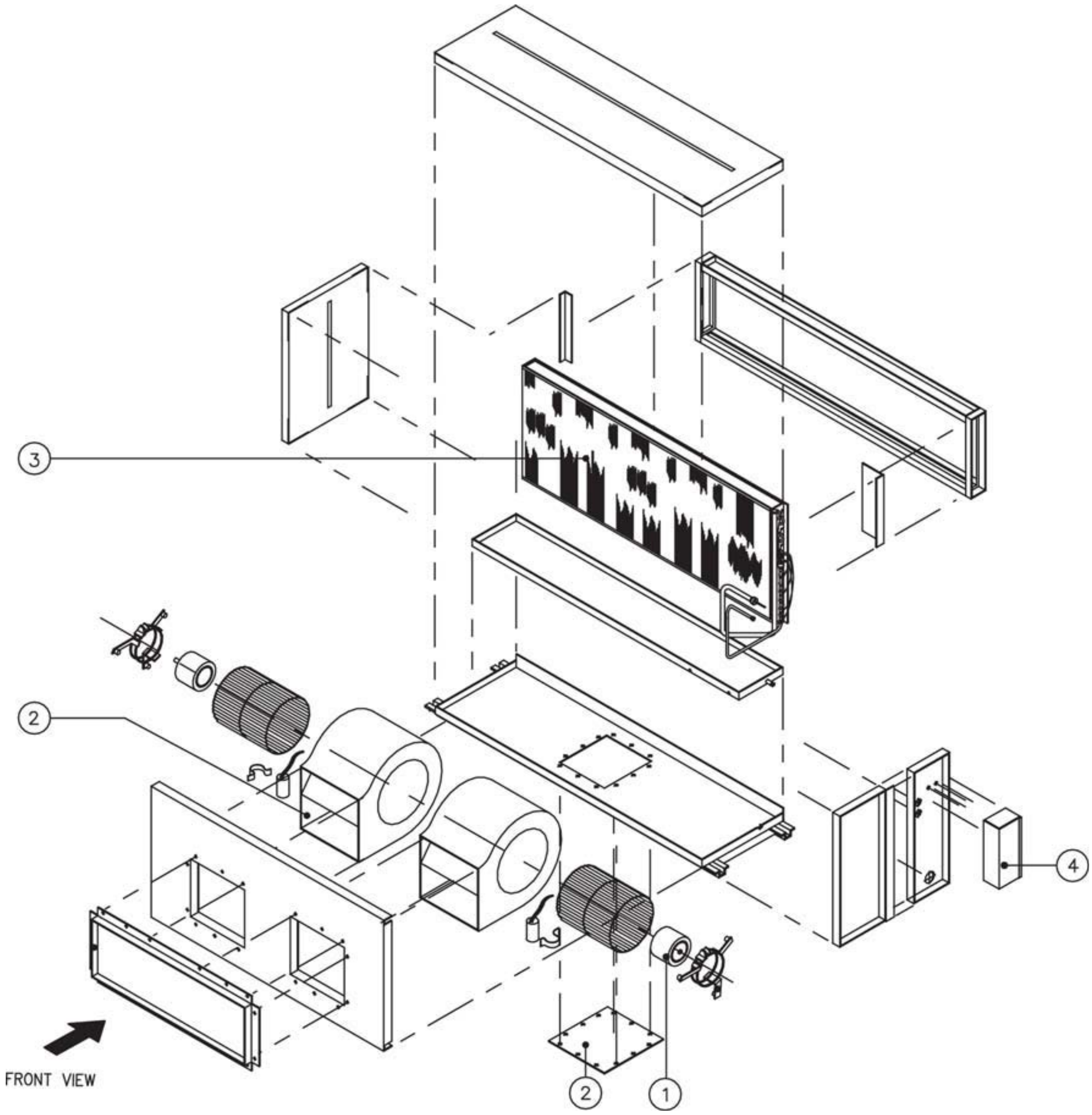
NO	DESCRIPTION	PART NO.
6	CAPACITOR	
	7.5MFD/440VAC	R04024024944

Parts Not In Diagram

	SARAN NET FILTER	R03084004115

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MDB 100 BW



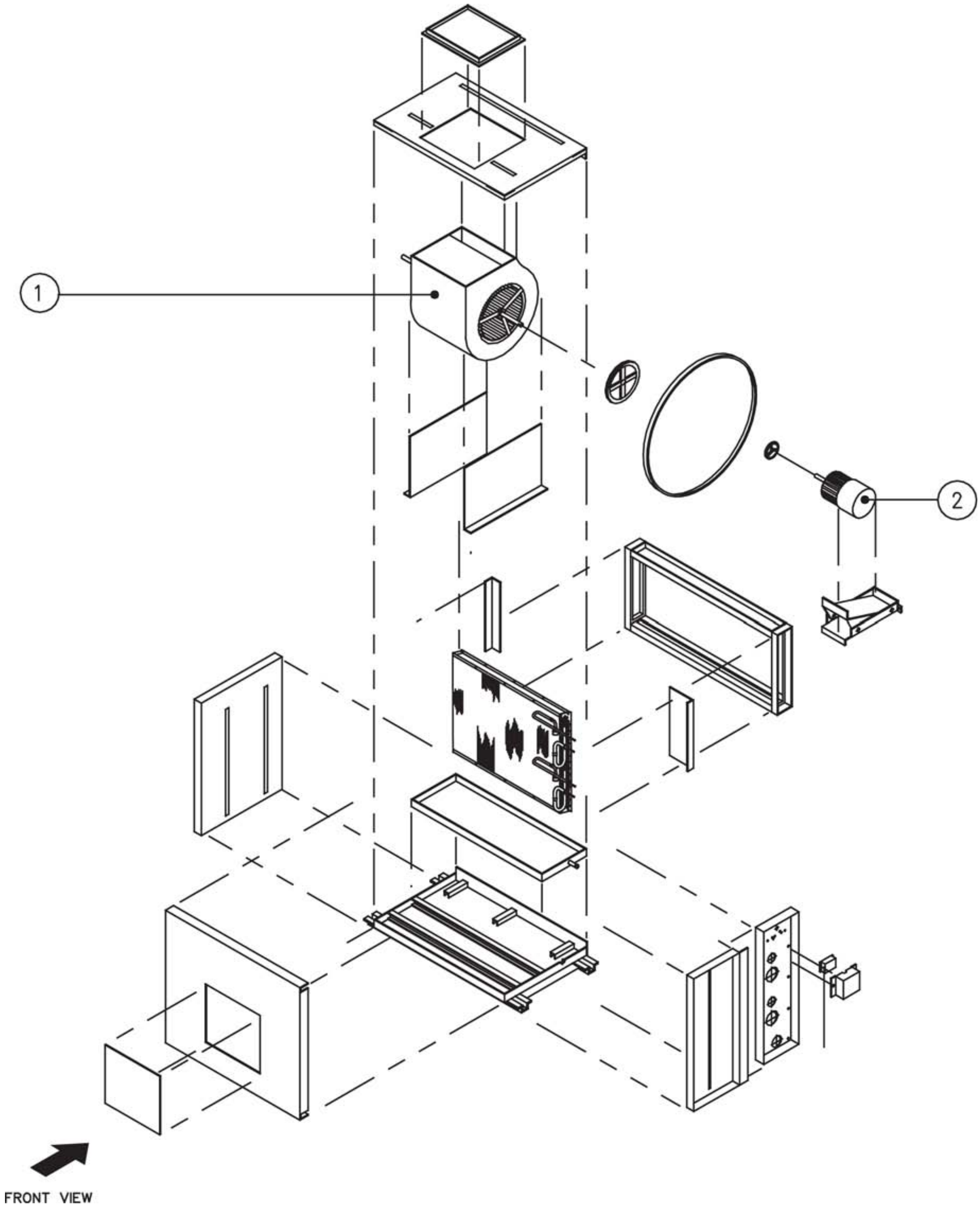
NO	DESCRIPTION	PART NO.
1	MOTOR	R03039019598
2	BLOWER	R50034023132
3	ASSY COIL	R50024022844
4	TER. BOX	-

Parts Not In Diagram

	SARAN NET FILTER	R03084004115
	CONTROL MODULE	R04089028536

1) ALL SPECIFICATIONS ARE SUBJECT TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE

Model : MDB 125 / 150 BW



NO	DESCRIPTION	PART NO.
1	BLOWER	R50034023308
2	MOTOR	R03039004558

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